DOCUMENT RESUME

ED 340 403 JC 900 047

AUTHOR Fullen, James, Ed.
TITLE OATYC Journal, Vol. VIII, Nos. 1-2, Fall 1982-Spring 1983.
INSTITUTION Ohio Association of Two-Year Colleges.
PUB DATE 83
NOTE 84p.; This journal is being entered into ERIC, one year's worth at a time, with "Table of Contents" type abstracts, in order to provide indexing access to the individual articles via the text of the abstract.
PUB TYPE Collected Works - Serials (022)
JOURNAL CIT OATYC Journal; v8 n1-2 Fall 1982-Spr 1983

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS College Faculty; *College Instruction; College Programs; Community Colleges; *Educational Technology; Institutional Characteristics; *Instructional Improvement; *Instructional Innovation; Part Time Faculty; Professional Associations; Program Descriptions; *Remedial Instruction; Teacher Evaluation; *Teaching Methods; Two Year Colleges
IDENTIFIERS *Ohio

ABSTRACT

"OATYC Journal," which is published by the Ohio Association of Two-Year Colleges, is designed as a forum for the exchange of concepts, methods, and findings relevant to the two-year college classroom. Along with commentaries and letters of reaction from the readership, the two issues of volume VIII include the following articles: (1) "Focus: Stark Technical College--Tomorrow's Future," by Katie Anderson; (2) "A Recruiting Opportunity for Two-Year Colleges," by Glenn Bayless and Phyllis Thompson; (3) "Part-Time Faculty in the Two-Year College," by Mary Anne Oestreich; (4) "Our Fascination with Electronic Technology is Myopic and Quintessentially American," by Paul Connolly; (5) "Part-Time Faculty: Some Suggestions of Policy," by Howard P. Tuckman; (6) "Issue: Should Part-Time Faculty Be Granted Fringe Benefits? And If So, What Benefits?" by Joann Wiblin and Joseph Brannon; (7) "Use of Micro-Computers in Engineering Technology Instruction," by Monty Coffin; (8) "Focus: North Central Technical College: A Comprehensive Planning Process," by G. M. Rustad; (9) summaries of the 1982 OATYC conference presentations; (10) "High Tech, Higher Education, and Ohio," by Robert Klingensmith; (11) "Developmental Education: A State Perspective," by Elaine H. Hairston; (12) "Issue: What Is the Role of Developmental Education on Ohio's Two-Year College Campuses?" by Benjamin McKeever and Phyllis E. Thompson; and (13) "What Works Best in Developmental Education," by Mary Lou Conlin. (UCM)

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THE OHIO ASSOCIATION OF TWO-YEAR COLLEGES

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OATYC JOURNAL

VOL. VIII NO. 1 FALL 1982
VOL. VIII NO. 2 SPRING 1983

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OHIO ASSOCIATION OF TWO-YEAR COLLEGES

JOURNAL

VOL. VIII NO. 1 FALL 1982

THIS ISSUE

COMMENT

Your 1982 OATYC Conference

TEXT

FOCUS: Stark County Technical College

A Recruiting Opportunity for Two-Year Colleges

Part-Time Faculty in the Two-Year College

PLUS ONE

Our Fascination With Electronic Technology Is Myopic... And Quintessentially American
Part Time Faculty: Some Suggestions of Policy

FORUM

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PRACTICUM

Use of Micro-Computers in Engineering Technology Instruction

REACTION

Response to "Mission First"

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VOL. VIII NO. 2 SPRING 1983

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A Comprehensive Planning Process

Summaries: The 1982 Conference Presentations

High Tech, Higher Education, and Ohio

PLUS ONE

Development Education: A State Perspective

FORUM

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PRACTICUM

What Works Best in Developmental Education

REACTION

Response to Rita Bova: Marketing the Humanities
The Science Fiction Approach

oatyc JOURNAL

Dr. Rae Rohfeld
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Cleveland, OH 44115

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OF THE
Ohio Association of Two-Year Colleges

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The *Journal of The Ohio Association of Two-Year Colleges* is published by the Association to provide the two-year colleges of Ohio with a medium for the sharing of concepts, methods and findings relevant to the two-year college classroom and to provide an open forum for problem discussion and review.

Subscription is part of OATYC active, associate, or institutional membership. However, single copies of the "Journal" are available at $3 each. A yearly subscription is available for $6 to persons or organizations who do not want membership in the OATYC. Postage is prepaid on all orders within the U.S.; $.50 per year is added for Canada, $1 per year for all other foreign countries. Communications regarding orders, special subscriptions, single copies, advertising, and permission to reprint are to be addressed to:

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c/o Dr. Rae Rohfeld
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COMMENT

YOUR 1982 OATYC CONFERENCE

Omar L. Olson

It is always a delight to have the opportunity to host a conference and to share our facilities at Lorain County Community College. It is especially delightful when an organization of our own, the Ohio Association of Two-Year Colleges, chooses to allow us that opportunity. We are grateful and extend to you an open invitation to partake in utilizing our facilities and our college family to their fullest.

Fred Allen, one of my favorites back in the golden days of radio comedy, was once quoted as describing a conference as "a gathering of important people who singly can do nothing, but together can decide that nothing can be done." Despite the fact that those spoken words were designed for mirth and merriment, many do share in that unfortunate conviction. Let me assure you that that is not the case with both your host committee and your host institution. Today education is at a crossroads and all of us who presently serve it must continue to join together as important people to search for viable new directions at those crossroads. Much will be done, I'm convinced, at the 1982 OATYC Conference and old Fred will again be rebuffed.

Your 1982 OATYC Conference will feature education idea workshops. As two-year institutions continue to play an increasingly more vital role in the life of so many citizens, these ideas can have abundant impact. Present them, explore them, consider them, and utilize them as you go forward and provide those vigorous leadership roles within the ample two-year system of education which is afforded our fellow Ohioans.

Education is the key to the binding together of humanity. May your conference nurture you to add polish to your link of that great chain.

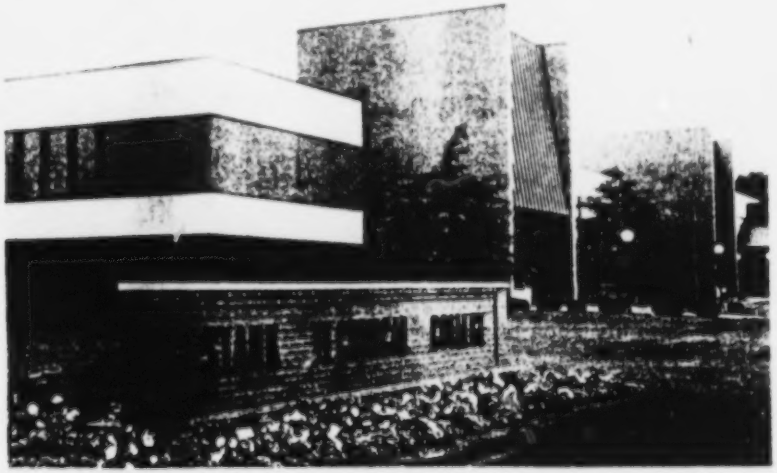
Omar L. Olson
President
Lorain County Community College
Elyria, Ohio 44035

TEXT

FOCUS: STARK TECHNICAL COLLEGE— TOMORROW'S FUTURE

KATIE ANDERSON

In each issue, the JOURNAL highlights a two-year college campus in Ohio. The JOURNAL is very proud to feature in this edition the Stark Technical College of Canton—as it explores the galaxy of tomorrow.



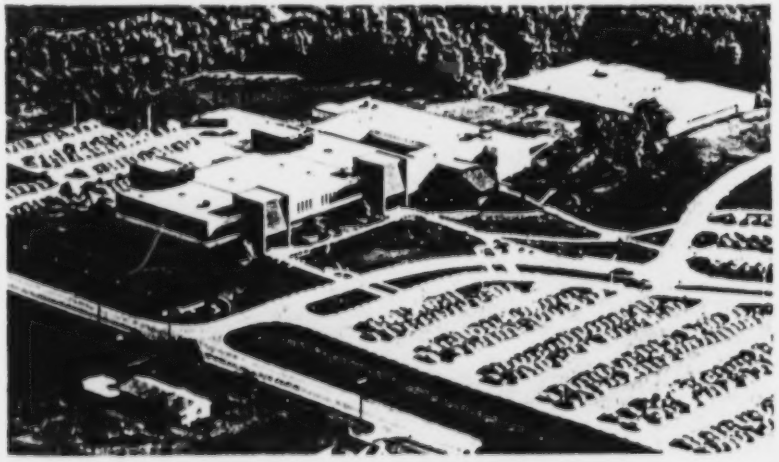
Celebrating its twenty-second birthday, Stark Technical College evolved from the Canton Area Technical School, established in 1960 and housed in several classrooms on the fourth floor of the Timken Building. The operation of the Canton Area Technical School was transferred to the Stark State Technical Institute, August 3, 1970, and instruction under the jurisdiction of the Ohio Board of Regents began in September in the building donated by the Timken Foundation. In June 1972, under the Ohio Board of Regents the name was changed to Stark Technical College.

STC's present campus is located on 10½ acres of green grass and surrounding wooded areas, conducive to a pleasant atmosphere for students and faculty. Consisting of 148,000 square feet, it houses over 56 classrooms and labs including 70 administrative faculty offices. Ideally situated in the center of Canton for viable access for the surrounding counties it serves, it also provides students and faculty with food services, an auditorium, student and faculty lounges, a bookstore and private meeting rooms.

The Learning Resource Center, which was jointly constructed by Kent State University, Stark Campus, and Stark Technical College, February 10, 1975, at a cost of $3,010,000 (appropriated by the 108th Ohio General Assembly in 1969), has both printed materials and media materials including over 67,000 books and 12, 638 bound periodicals to facilitate students and faculty. The LRC is centrally located between the two campuses for easy access.

The College has five academic divisions: Engineering Technology, Business Technology, Allied Health, Public Service and General Studies Technology. Under these divisions, Stark Technical College offers 22 two-year associate degrees and two one-year certified degrees for over 4,000 full and part time students. The average age of STC students is 25.

The Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET, formerly ECPD) conveyed the six engineering technologies: Civil Construction Technology, Drafting and Design Technology, Electrical Engineering Technology, Electronic Engineering Technology and Mechanical Engineering Technology with full accreditation in July of 1977, followed by accreditation of the Engineering Modeling Program in 1982.



The Medical Assisting Technology Program is accredited by the Committee on Allied Health Education and Accreditation and the American Association of Medical Assistants. Official notification of accreditation was received on July 23, 1981. The Physical Therapist Assistant Program also received accreditation this year.

The Phase III facility, Health Technology Building, completed in September of 1980, was constructed at a cost of $2,250,000 from funds appropriated by the legislature.

The Commission on Institutions of Higher Education of the North Central Association of Colleges and Secondary Schools granted continuing accreditation to Stark Technical College on April 27, 1981, for a period of ten years.

The Phase IV groundbreaking will probably be completed in 1983, and will be the new home for the Automotive Program and facilitate some engineering classrooms as well.

In 1978, the Cooperative Education Program was created for students to complement their classroom academics with outside, practical on-the-job experience. The Cooperative Education Program is offered in all Stark Tech courses except fire science and medical programs. The Cooperative Education Program is in its fifth year of existence and boasts a successful track record.

The Alumni Association, consisting of 143 members, has done a fine job this year in supporting the College. It is currently researching the feasibility of a program in which Association members would talk to local high school groups along with counselors from Student Services.

The Education Task of Stark Technical College

The major areas for which this institution assumes responsibility are:

1. To develop and offer Associate Degree programs in Applied Science and Applied Business which will prepare a student for employment.
2. To present training at a level that will permit application and acceptance into a baccalaureate degree program in a technical field if desired.
3. To promote a positive attitude toward work, including high standards of personal behavior, character, integrity, and self-improvement.
4. To provide adequate general education to enable students to intelligently assume the responsibilities of citizenship.
5. To develop and offer continuing education programs for occupational advancement, refresher and retraining programs.
6. To provide counseling and advisement services to students and citizens which will assist them in choosing appropriate courses of study.
7. To provide a source of skilled manpower upon which the area may draw for the successful continuation and expansion of technical enterprises.
8. To provide faculty, facilities and consultant services for business and industry.

Objectives of Technical Education

Technical Education has been designed and planned to meet the following objectives:

1. The first objective is to provide students with a marketable level of skill and knowledge. The skills and knowledge required by a given technology are identified by working with the employers currently located in the community. However, programs are intended to be broad enough to encompass skills and knowledge needed in technical occupations which hopefully may come into the area.
2. The second major objective is to prepare students for constructive citizenship. It is evident that every technician who works in an industry today must function effectively as a member of the community, state, and national groups, and therefore must be equipped to use, intelligently, basic principles and skills of citizenship.
3. The third specific objective of technical education is to develop in the student certain of the social competencies which make employment possible, permanent and profitable.

In additon to the specific objectives which apply directly to the student, it is also recognized that the College must assume a responsibility to help meet the technical manpower needs of the area's business and industry, thereby contributing to the general welfare of all individuals who reside within the area served by the College.

With the growing needs of changing technologies throughout the country, Stark Technical College is continually striving to endorse curriculum programs that meet this challenge. The Engineering Department is currently considering curriculum development in Robotics and Microprocessing Programs.

The twenty-first century is almost upon us, producing job markets that are new and unknown. It is Stark Technical College's obligation to prepare students for these alternatives and current research in this area provides a network of resources to facilitate this training.

In this age of nuclear power, computers, video games and untapped new horizons, field trips through the solar system are no longer an improbability and STC offers the community the opportunity to climb aboard its shuttle, as it explores the galaxy of tomorrow.

Katie Anderson
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A RECRUITING OPPORTUNITY FOR TWO-YEAR COLLEGES

Glenn Bayless and Phyllis Thompson

Located within the recruiting area of nearly every two-year college in Ohio is an adult basic education center. The graduates of adult basic education programs earn the GED diploma, an equivalent high school certificate. With this diploma these students become potential recruits for two-year colleges where the GED is accepted as meeting admission requirements.

Many adult basic education students are interested in attending two-year colleges, but are reluctant to act alone to further their educational career. Statistics compiled by the State Administrator, GED Testing, Ohio Department of Education, document that the major motivating factor for adult basic education students is self-improvement: to get a better job, to be able to qualify for training programs, to develop educationally, and to become more self-sufficient. Six out of every ten GED applicants tested indicated plans to further their education. This response becomes significant when translated to numbers of Ohio residents desiring education beyond the GED. Over 16,000 residents were tested in 1981. This means 9,600 Ohio residents have expressed a desire to further their education. Each year this number increases.

Attention must be paid to the reluctance of these students to act alone to further their education. Their expressed goals of self-improvement are generally encouraged by one or more significant other, spouse, children, parent, teacher or friend, in the students' life. Unfortunately, this support of the students' wishes for self-improvement is not typically a long-lasting support. Such support seldom encompasses further studies past the GED experience, even though the individual students are motivated to further their education.

Another important characteristic of the GED recipient is the average age. Since the late 1970's the average age for GED recipients in Ohio has been close to 30. In 1981 the mean age was 29.8 and the median was 25. Only one of six students attempting the GED examination was 19 or less.

This age factor may, in part, be the basis for the reluctance to further educational studies. Older students have fears when challenged with the prospect of competing with younger students in college classes. Also many would be first time college attendees, the first from their families to even think about a college education. Due to the smaller pool of traditionally aged students, two-year college admission directors and recruiters are forced to actively seek older students for their campuses. With this change in recruitment strategy, admission and recruiting personnel need to develop methods to attract, and answers for questions from this older, reluctant population. The potential pool of recruits found in adult basic education centers provides a ready-made testing ground for these new recruiting methods.

The personal contact established when recruiters visit the adult basic education centers could be mutually beneficial to the two-year college and the students in the centers. This contact would further motivate the students to progress toward their immediate goal of the GED, as well as answer questions and quiet fears about post-secondary education by explaining procedures and courses, both credit and continuing education. Describing any special academic support programs available on campus, such as developmental education, could be the impetus needed for a reluctant adult to return to a traditional educational setting.

By recruiting GED students, two-year colleges can develop a stronger relationship and articulation network within the community as well as increase enrollments at the college campuses. Adult basic education students studying for the GED are motivated, have expressed an interest in furthering their education, and need only to be encouraged to find their way to local two-year colleges, thus improving themselves as well as adding to the enrollment. Both the institution and the students benefit.

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PART-TIME FACULTY IN THE TWO-YEAR COLLEGE

MARY ANNE OESTREICH

"What shall I do for a living!
I've only one life to live."
—Rudyard Kipling

When Rudyard Kipling wrote these lines he may have envisioned them as coming from the lips of a soldier, farmer or barmaid. He certainly would not have associated them with part-time teachers. Nevertheless, they mirror the thoughts of thousands of such people who find themselves doing part-time work.

Major trends in the economy have always affected the two-year colleges. Inflation, the high cost of energy and the reduction in the annual growth rate of state appropriations have forced administrators to look for ways to trim their budgets. One such possibility which has proved highly successful is the increased reliance on the part-time faculty.

During the 1960's with the great influx of students to the two-year colleges, colleges depended on the services of the part-time faculty. This

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dependency has increased over the years so that the growth of part-time faculty has exceeded that of the full-time. In the majority of community colleges today, part-time instructors now constitute a majority of faculty. *The American Association of Community and Junior Colleges Directory* lists 104,777 full-time and 137,064 part-time instructors.

The reasons are given for this increase in the employment of part-timers: The first is that a college can save substantial amounts of money, and the second is that through this policy the college can increase its flexibility.

The part that money plays is easily seen. Part-time instructors cost a college considerably less than full-time teachers. The former, paid on an hourly rate, generally receive one-third to one-half of the salary paid to full-timers who teach the same courses.

Part-timers save an institution money because of their lower wages, and by their exclusion from any fringe benefits. Sick leave provisions, retirement programs, health and life insurance are not available to part-timers. Other benefits such as office space and secretarial assistance may also be denied them.

Flexibility in curriculum and scheduling is another premise for employing part-time instructors. They can be used to staff courses whose enrollments are uncertain, thus enabling an administrator to cancel a course or an instructor's contract with little cost to the college. Part-timers with special skills can also be hired for regular or nontraditional courses scheduled in a variety of off-campus locations and at a variety of times such as weekends or evenings.

Administrators feel that the salary differential between part-timers and full-timers exists because part-timers perform few services other than meeting their classes. These instructors are not required to serve on any committees. It must be acknowledged that serving on committees takes a considerable amount of time, and time is an important factor in any employment.

A stereotypical idea of the part-timer is that he or she is not interested in committee work because he or she has another full-time job and only takes the teaching position at a two-year college for "fulfillment."

On the contrary, part-time teaching is the only employment available for many instructors. Some put together a teaching schedule at two or more colleges which would more than equal the teaching load of a full-time instructor. However, because of hourly pay, there is no reimbursement for preparation time or counseling students; consequently, their compenation is considerably less than another with a comparable teaching load.

The increase of part-time faculty members in the two-year colleges has given rise to a proportionate increase of research in the comparison of full-time and part-time instructors. The study done by Cruise, Furst and Klimes (1980) indicates that "there were no statistically significant differences between the two groups on the evaluations as a whole . . . One could conclude, then, that at this community college part-time teachers are just as effective as full-time teachers at a lower cost" (p. 55).

There are others, however, who maintain that part-time instructors are more effective than their full-time peers. Part-timers frequently put forth more effort in preparation and teaching because they must satisfy the needs of their students. If students shy away from a particular part-timer's class, that instructor is soon out of a job. Anyone protected by tenure is not under the same pressure; he retains his position even if his students drop out.

Frequently the enthusiasm and new ideas of part-timers can spread to the "deadwood" in the full-time ranks. Part-timers can often bring fresh ideas because of an awareness of the newest trends in business and industry. Instructors who have been teaching the same classes in the same institution for years may have a difficult time competing with this enthusiasm.

If an institution employs many part-timers, for the benefit of these instructors, the good of the students and the reputation of the institution itself, that college should provide adequate training for its instructors. Although this seems to be a reasonable expectation, many community colleges have not developed orientation programs to meet the needs of part-time faculty.

A well-developed training program should have excellent teaching as a major emphasis. It should present the policies for class attendance, grades and examinations. Besides these factors, there ought to be training for the part-time teacher in the instruction of the nontraditional student. A teacher training program can encourage the new instructor to use different methods of instruction and student evaluation when that person is working with the older adult, high-risk or handicapped student. Administrators are responsible for the quality of education in their institutions. If numerous part-timers are employed, they will need to receive adequate training.

There are some part-time staff who are in a constant flux. They have no intention of staying at one college for any amount of time because of outside employment or other work choices. Most two-year colleges have, however, that group of part-timers who have remained at the college for a substantial number of years, have demonstrated a commitment to the institution and who tend to act as a stabilizing element in any department in which they teach. These instructors should be recognized for their part in the growth of the institution and be adequately reimbursed.

While recognizing the inadequacies of the part-time system, many instructors are realistic enough to know that in the current educational situation there is a greater supply than demand for instructors. Statistics show that, at least through 1985, there will be keen competition for any teaching position at the university or two-year college level because the supply of master's and doctoral candidates will more than meet the demand.

Because of this inability to change from the status of a part-timer, many instructors consider themselves at the academic nadir. They feel they are an expendable commodity, and, therefore, not fully accepted in the world of the two-year community college.

This issue of frustration brings to the surface some important questions: How can part-timers, who do essentially the work of the full-time faculty, be accepted as an integral part of the community college? Is it unreasonable for

part-timers to expect compensation for out of class-time work such as correcting papers or counseling students? Is it possible to offer merit pay to part-time instructors who excel at their jobs?

By all indications part-time instructors are not only here to stay at the community college but will continue to grow in number. This marriage between the two may not be one of bliss but it certainly is one of mutual dependency; the colleges need the services of the part-time faculty, and the faculty need the colleges for their jobs.

If one relies on the other, each must give what is fair and just. For the salary they receive, part-timers will have to continue to bring enthusiasm, imagination and expertise to their classes. At the same time, community colleges can analyze their compensation practices toward part-time instructors. Are these institutions taking more that they give?

Mary Anne Oestreich
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IN MEMORIAM

The editors of the OATYC JOURNAL and members of the Ohio Association of Two Year Colleges convey their deepest sympathy to the family of Max Covert. Max, former President of the Northwest Technical College, Archibold, Ohio, died September 20, 1982.

Retired from Ford Motor Company after being employed there for 30 years, Max was the first president of Northwest Tech. and served in that capacity for ten years prior to his retirement in January 1982.

A staunch supporter of two-year education and especially technical education in Ohio, Max lent his leadership, experience and expertise to numerous state-wide committees and organizations and served as the President of the OATYC during the 1977-1978 school year.

He was a mentor to many persons aspiring to administrative positions, especially presidencies and deanships within the two year college system.

Max, you will be missed.

PLUS ONE

Our PLUS ONE this edition is in two parts: Part One is Paul Connolly's "Our Fascination with Electronic Technology . . . ," permission granted by "THE CHRONICLE OF HIGHER EDUCATION," and Part Two, Howard Tuckman's "Part-Time Faculty: Some Suggestions of Policy," permission granted by CHANGE. The Connolly article is a reprint from the September 22, 1982, CHRONICLE; the Tuckman article, from the January/February, 1981, CHANGE.

OUR FASCINATION WITH ELECTRONIC TECHNOLOGY IS MYOPIC - AND QUINTESSENTIALLY AMERICAN

Paul Connolly

In my public-school district we bought 52 microcomputers this year (24 of them for 3 elementary schools) at a cost of $35,000. Six years ago this district introduced its first high-school computer course; today it offers 13 sections of 3 courses to 282 students, and contemplates requiring students to pass a half-credit computer course to earn a diploma.

We seem to share the faith in computers expressed by the president of the New York State School Boards Association when he said, in an issue of the association's journal devoted to "Computers and Public Education," that "minimal operational skill will become an absolute necessity if our students are to lead productive and useful lives."

A variety of institutions require—or are talking about requiring—"computer literacy" for a degree, and some are even talking about requiring students to own a personal computer. At my own Yeshiva College, it has been variously suggested that a computer course might satisfy the foreign-language requirement, the natural-science requirement, or a mathematics requirement. In the guidance center, I find myself suggesting that students fill out their programs with a computer course rather than one in philosophy, history, physics, or poetry. Half-wittingly, I, too, assume that computer literacy is essential to productive and useful living.

But this will not compute. In an age that lives by what Edward Hoagland calls the Silver Rule— "doing unto others just about what we think they would do to us if they had the opportunity"—schools require no evidence of the ethical or logical "literacy" needed to control, for example, nuclear weapons, genetic engineering, or limited global resources.

Few college students are expected to know the difference between utilitarian and deontological ethics, or to appreciate the scientific distinction

between "accurate" and "precise"—yet every adolescent is now expected to know a RAM from a cursor. Few are required to study Mill's method of inductive inference or, for that matter, to know inductive from deductive reasoning.

Yet anyone who cannot tell floppy disks from Winchesters may soon be denied a diploma. Not many schools require that students read the "Great Books," yet we now assume that they will be conversant with *Byte*, *Interface Age*, and *Info World* magazines.

There is something myopic—an quintessentially American—about this fascination with electronic, glow-in-the-dark technology. Riddles, puzzles, colored cubes—all whet our competitive urge to solve problems. But life's darker mysteries make us impatient and anxious. That life should ever be mysterious is an alarming thought; it underscores our littleness, our vulnerability. Puzzle-solving, on the other hand, is even popular, Puzzles are solved by human ingenuity and are, therefore, a gratifying testimonial to our wits.

Americans are addicted to the intellectual "quick fix," to the pragmatic act. Meanwhile, we fail to develop the patience, discipline, and responsibility needed to become learned and wise enough to deal with the ethical and political dilemmas that threaten civilization. Even in proclaiming computerism, our creed is not that we should all be well founded in the mathematics, or even in the mechanics, of computers, but only that we should all be adept at tinkering. It is as if we fear that one day we may be asked to check ourselves out of the supermarket; to speak fluent PASCAL, FORTRAN, or SNOBOL; or to answer to a computer for each nano-second we have lived.

I'm no twentieth-century Luddite, rioting against machinery because it threatens an older world of handicrafts. Is it Luddism to believe that extreme love of machinery is unhealthy? That a society with an adolescent lust for its own technology is decadent?

A generation ago, we mistakenly feared that robots would rob us of our dignity and purpose. Now, we talk as if data processing were at the core of every enlightened being. Will computers, then, provide the future foundation of our common culture, the means by which we experience one another? Not a shared history and shared languages, nor an appreciation of arts and sciences that have evolved over millennia, but a multi-cabled web of monitors, megabytes, microprocessors and daisy-wheel printers?

Computer science is a very popular major today, and the students who never leave the computer room are legendary. But that is not necessarily because this generation intuits the advent of a postindustrial society.

One appeal of computer science is that it is a practical major; it can lead to a profitable career in a "growth profession." And, given the tuition at colleges today, it is widely assumed that the price of an education should include preparation for a growth profession.

The study of computers fulfills that expectation in the opportunity it offers those who would design, operate, or maintain computers. But as education focuses more on the practical and profitable, it neglects the older expectation that it should examine the ends of living at least as closely as the means.

Computer science is also a field where child prodigies may still astound us. Fourteen-year-olds surpass the knowledge of their 28-year-old professors. And the young, always reluctant to have to mature into wisdom, find in computers a prospect of instant gratification, of being the best at a very early age.

Computers, we are told, will soon be ubiquitous, and those who are not knowledgeable about them will have a problem. It is the threat of computers, as much as the promise, that prompts curiosity. Parents who cannot compete with their children in videogames marvel at the brave new world they do not understand, and join the chorus that warns that those who do not rejoice in the new technology may be buried by it.

A last, ignoble reason for the present interest in computers is simple snobbery, what Lionel Trilling defined as "pride in status without pride in function." We are eager to own the first anything on our block. Never mind that this complex machine may do more wondrous things than our small minds can imagine. We want one, the way we last wanted 10-speed bikes and pocket calculators, even if we rarely shifted the gears or calculated beyond basic arithmetic.

Dylan Thomas wrote that "the endless beginnning of prodigies suffers open." He was describing birth, but computer technology today evokes comparable wonder.

I myself respect technology. I would miss hot and cold running water and air-conditioning and central heating as much as any person. But I do not consider those amenities to be the ends of living. I do not consider that plumbing will make me free or that man can live by microwave alone.

The business superintendent of my public-school district needs a computer, as does the registrar at my college. But that every man, woman, and child needs computer literacy to lead a productive, useful life remains to be demonstrated.

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PART-TIME FACULTY: SOME SUGGESTIONS OF POLICY

Howard P. Tuckman

Much has been written about the coming decline in the demand for faculty in academe. In some fields, such as history, linguistics, and the foreign languages, evidence reveals that the number of academic openings is already diminishing. Armageddon in these fields has taken the form of failure to replace those who leave or of replacement of them by faculty at junior ranks or in nontenure positions. In the latter two cases, the probability of retention is fairly low. Even senior faculty have begun to feel the effects of the decline. For all but a handful, the easy mobility of the sixties has been replaced with the uneasy knowledge that tenure can no longer be taken lightly.

Though students of academic labor markets differ on the particulars of what has caused the recent depression in higher education, most agree that declining enrollments and reduced public appropriations are the major villains. Most also agree that, whatever the cause, the consequence will be drastically limited opportunities to enter academe for those currently outside. At the earliest, most estimates suggest no relief until 1985. Not surprisingly, this has given rise to the claim that a large number of talented persons will be denied access to a position in academe and, as a consequence, that the quality of both research and instruction may suffer.

An Era of Gypsy Faculty

At the same time that the demand for full-time faculty positions has been drying up, the number of part-time positions has increased. Figures from the National Center for Education Statistics suggest that between the 1972-73 and 1976-77 academic years the number of part-time positions increased by 50 percent whereas positions for full-timers rose by only 9 percent. At universities, approximately 5,100 part-time positions were created during the four-year period; during the same period, a like number of full-time positions were eliminated. In the four-year institutions, about 26,000 part-time positions were created; the number of full-time positions rose by 32,000. Part-time positions at two-year institutions outnumbered full-time positions by a ratio of 1.3 to 1 by the end of the 1976-77 academic year, and, at many schools, part-timers became a silent majority of the faculty.

The dramatic growth in the number of part-time positions is only part of the change that the academic scene has been experiencing. Concomitantly, some faculty are being hired on a nontenured basis. The size of this gypsy population has yet to be measured but it is not insignificant.

The rising market for temporary faculty members creates both peril and promise for institutions that employ them. How these institutions choose to recruit and retain temporary faculty is a subject of considerable interest to the academic community, because it affects the quality of education at our nation's institutions. Surprisingly, the question has not been addressed in the literature.

The Attraction

The undeniable reality of the late seventies and early eighties is that resources will be tight in academe. The relatively lavish budgets of the sixties have given way to yearly increases that only occasionally match changes in the cost of living. For most institutions this implies a significant contradiction in new course offerings, the number of sections of a course available, and the number of speciality courses provided. Some disciplines have been spared from decline, largely because of an increase in enrollments (e.g., accounting, management, and other business-related fields); for most, the resources available to meet the increase do not match those of the last decade. Increasingly, academe is learning to "satisfice."

In this environment, part-timers provide an attractive option. That they can be obtained at a lower cost than other faculty is fairly apparent. Whether they should be is debatable. It seems likely that some institutions would find it necessary to cut back their course offerings severely, if not close altogether, if denied the use of part-time faculty. By saving on fringe benefits and by paying lower salaries, these institutions reduce their instructional costs. Particularly in state colleges constrained by tight budgets and private schools faced with limits on what can be charged for tuition, the availability of a low-cost pool of faculty creates a strong temptation to substitute these faculty for full-timers.

Institutions not facing severe cost constraints may nonetheless find part-timers attractive as a means to hedge against future shock. Most administrators have been exposed to the dire predictions of the future of academe. Administrators at schools experiencing temporary enrollment surges are loath to tenure-in faculty since they may find themselves with a surplus when the long-awaited cataclysm arrives. The presence of a pool of gypsy faculty provides the flexibility to fill crowded classrooms today without the risk of having a surplus of faculty in the future.

Credentials or Lower Cost Instruction

The considerations discussed here provide a strong incentive for institutions to hire part-timers irrespective of how this may affect the quality of their program. As a consequence, many part-timers have been hired without regard to whether they possess the appropriate credentials. Presumably, the rationale for this is that because part-timers are only temporary, their qualifications are not important. In the case of part-timers hired to offer a specialized course on a one-time basis or to meet an enrollment overload, the costs of screening, measured both in time and money, may exceed any potential benefits. In a limited number of cases (e.g., the nationally known surgeon lecturing at a medical school part-time), this assumption may be warranted. In others, it is open to question. At issue is how much knowledge of a field is necessary to be a good teacher.

Data from our national survey of part-timers conducted in the spring of 1976 strongly suggest that part-timers typically hold either a M.A./M.S. or B.A./B.S. degree. Comparatively few hold PhD's and relatively few have published or shown other evidence of professional accomplishment. Select data for part-timers at universities and four-year institutions are provided in Table 1.

Table 1.—Select Data on Academic Part-Timers

	Type of Institution			
	Four Year		University	
	Male	Female	Male	Female
Years of part-timed	4.4	4.1	7.1	5.8
Years of full-time experience	2.4	2.1	4.3	1.5
Percentage with masters	35.9	46.6	26.8	45.2
Percentage with PH.D.	35.9	21.3	45.5	24.6
Number of articles published	1.95	.80	2.91	1.28

It can be argued that a majority of part-timers teach at the principles level and do not need the same skills as full-timers. Yet, though it is true that many institutions have a tradition of "slighting" the principles course by employing either graduate assistants or junior faculty in lieu of their senior staff, these are persons who tend to be familiar with the current thinking in the field. Because most part-timers enter academe without an adequate screen of their abilities, it is difficult to evaluate their awareness of the current literature or their contribution in the classroom.

The loose attachment of most part-timers to their employing institutions usually means they are not subject to the usual teaching evaluation procedures and that the traditional grapevine does not function to provide informal evaluation. Likewise, the "hit-and-run" nature of the instruction provided at some schools makes it difficult for full-timers to evaluate the abilities of their part-time counterparts.

Part-timers with an occasional attachment to an institution can be distinquished from those with more permanent status. Within the part-time population exists a group with a strong attachment to their employing institution and a dedication to upgrading and improving the quality of its offerings. This group tends to teach on a fairly frequent basis and to display a strong interest in the policies of their employers. As best as we can ascertain, its number is fairly small. About 10 percent of the part-timers at four-year institutions, and 15 percent of those at universities have a permanent position. Measured in other terms, about 55 percent of the part-timers at four-year institutions and 70 percent at universities have taught part-time three or more years. These figures suggest that though many part-timers have a history of employment in academe, few achieve permanent positions at an institution.

The Question of Substitutability

Some have argued that many part-timers hold a full-time job and on-the-job experience may be a substitute for scholarship. Thus far, no one has proposed a measure that provides a way of rendering equivalent years of teaching and years of work experience. Even if such a measure could be provided, it seems likely that it would involve equivalents that would differ by discipline. A fair amount of substitutability exists for faculty in the typical business, law, or education school; relatively little exists for the romance languages, history, or literature. That this is the case is borne out by the fact that a large proportion of those holding humanities Ph.D.s are employed at universities; those in industry are largely in jobs that do not use their college-obtained skills.

Data on the distribution of part-timers do not suggest that substitutability is a factor in the distribution of part-timers across fields. Instead, the proportion of part-timers appears to be related to decisions regarding the fields in which enrollments are likely to fall in the future. Apparently, most institutions hire part-timers on an ad hoc basis and little, if any, attention is paid to the question of how part-timers can be used to augment the quality of instruction.

Part-Timers and the Quality of Instruction

Substantial concern has been expressed about the possibility that a reduction in the number of new Ph.D.s will mean fewer researchers, slowing the spread and implementation of new ideas, discouraging innovation, and producing a more conservative research community. It seems likely that this reduction will also affect the quality of instruction, if only because those who do research and those who teach are usually one and the same.

We have observed that the decline in the number of new full-time positions has been accompanied by a growth in the number of part-time positions. If the vitality of academic institutions is threatened in the full-time market, it stands to reason that at least part of this threat can be countered by effective hiring procedures in the part-time market. Though such policies cannot solve the problem of how to maintain the vitality of academic research, they can help to preserve the vitality of the instructional effort at many schools.

Scant evidence exists that the institutions employing part-timers have recognized the possible qualitative improvements to be gained from their use. Part-time faculty have the potential to bring new points of view to their teaching, unfettered by years of repetition and untouched by the shibboleths of their employing departments. The dynamics of dissent can be at least partially recreated if departments base their hiring of part-timers on rational rather than ad hoc criteria. The role of part-timers need not be confined solely to classroom instruction. Periodic and meaningful interchanges between part-timers and their full-time colleagues can prove meaningful for both groups.

Such enrichment is unlikely given current attitudes and practices. The part-timer is currently a marginal member of the academic community. The absence of a legitimate credentialing mechanism gives rise to the suspicion, if not the belief, that the part-timer is not a "real" faculty member. Under these circumstances, it is hard to envision the type of interchange just described.

Toward the More Effective Use of Part-Timers

The following types of policies should be given serious consideration by institutions interested in improving the quality of their instructional effort:

•A conscientious effort should be made to determine institutional needs for temporary faculty prior to the start of each term. This would provide a useful first step towards integrating part-time faculty into the instructional program on a planned basis.

•A serious attempt should be made to establish criteria consistent with the role temporary faculty are expected to play. These criteria should also be consistent with the department's or other employing unit's criteria for hiring full-time faculty.

•The employing unit should compile a list of persons eligible to teach part time on the faculty. This list should be updated yearly and should be subject to review by the hiring committee. These procedures will help to increase the legitimacy of part-timers and subject the hiring process for part-timers to greater scrutiny.

•Part-time faculty should be subject to the same evaluation criteria imposed on other faculty and should be eligible for the same types of rewards.

•Institutions that pay part-timers on a flat-rate basis should give serious consideration to basing their compensation to part-timers on such criteria as degree, experience, productivity.

•Part-timers should be given the same fringe benefits as full-timers, albeit on a proportional basis.

•A serious effort should be made to integrate part-timers into the intellectual life of their employing departments (e.g., through occasional workshops or brown-bag lunches, representation at department meetings, etc.).

Though these recommendations are not exhaustive, they do suggest several first steps toward the use of part-timers as a means for improving the quality of instruction in an era of steady-state or declining hiring. The needs of individual institutions will differ. For example, some will find that part-timers are best used in a research capacity, in specialty courses designed to offer an alternative point of view, or to supplement existing offerings. In each case, additional policies are necessary to supplement those proposed. However, it seems clear that if these are adopted, the part-timer will be given a new level of respectability and an environment more conducive to productive exchange.

A balance must be struck among several conflicting needs. The flexibility that part-timers provide their employers is a major source of their attraction and a major means by which institutions can introduce new ideas and perspectives. For this reason, proposals to tenure-in part-timers must be considered in the context of what will be lost if additional faculty are tenured. On the other hand, the failure to extend to part-timers some degree of security may reduce their willingness to speak out honestly in the classroom. The way to deal with these issues is with explicit policies, not on a case-by-case basis.

The Future

Will the number of part-time positions continue to grow in the future? If current trends persist, the part-timer will become an increasingly familiar figure on the campus green, if only because he or she is so much cheaper to hire than a full-timer. However, the coming decline is likely to force a retrenchment that will affect the part-time market and reduce the demand for this type of labor. Likewise, full-timers are likely to put pressure on their institutions to retrench their part-time labor force first. Whether these forces will be sufficient to reduce the recent growth in the part-time labor force is difficult to determine at this point. That they will have some effect is clear.

From a national perspective, the major concern is that institutions will use the part-time labor pool as a source of cheap labor rather than as a means to upgrade their instructional program. It would surely be a great tragedy if we fail to recognize one of the few tools we have left to stave off the effects of the coming decline.

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CORRECTION NOTICE

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FORUM

ISSUE: SHOULD PART-TIME FACULTY BE GRANTED FRINGE BENEFITS? AND IF SO, WHAT BENEFITS?

Arthur Cohen and Florence Brawer pose these questions in their late book, THE TWO-YEAR COLLEGE INSTRUCTOR TODAY:

> *The teaching profession in two-year colleges is marked by many changes. The widespread employment of part-time instructors, which accelerated so that by 1974 there were more part-timers than full-timers in the colleges, has affected professionalization. But because part-timers traditionally have not shared the same benefits and pro-rata pay as full-timers, and because they are not closely affiliated with the full-time activities of the campus, it is difficult for them to be an active part of the profession . . . Yet, why should the part-time faculty not be growing in number? They meet their classes, give their lectures, hear student recitals, turn their grades in on time. Put another way, what can the full-time faculty do that part-timers cannot? Certainly the full-timers have more experience, read more journals, are more concerned with curriculum and instruction, more interested in research. They are, but what do they do? What is that body of specialized knowledge that they bring to bear on problems of instruction? Are they more likely to employ specific measurable objectives or validated criterion-referenced testing devices? Are they more likely to report student learning in terms that have a clear and consistent referent? The answer is that as the full-timers insist on closing the door to their classroom and hiding behind perquisites in their contract, so no one knows the extent to which their students have learned, it is impossible to tell. Until evidence reveals that their students learn more than students taught by the part-timers, why should a district hire full-timers at all, with the necessity of paying them more salary and fringe benefits and being obligated to them for continuity of employment (pp. 3, 104)?*

Responding to the issue are JoAnn Wiblin and Joe Brannon of Central Ohio Technical College, Newark.

WHY NOT?

JOANN WIBLIN

The part-time faculty at any two-year college performs a valuable service to that institution. In the first place, they are a community resource which should be tapped. They may be former business or professional people whose experience is invaluable in the educational setting. As members of the local community, they also are public relations envoys to their own social and business circles for the educational institution, and thus can provide a personal touch to a college's formal image. Finally, in an educational sense, they allow greater flexibility in scheduling than does a strictly full-time faculty. Courses may be added as the need arises without over-extending an already burdened full-time faculty.

For these reasons, it is to the institution's benefit to encourage less turnover in the part-time faculty. Stability in this sector reduces the problems and promotes consistency of the curriculum. One way to reduce turnover is by being attentive to the part-timers' special problems, and by treating him or her as a professional. Scheduling, for example, can make life easy or difficult. A four-hour class can be taught on one or two days a week or on four, and the difference is considerable if that is the only class being taught. Preparation time can be kept at a minumum by assigning identical classes, rather then two or three different ones. Office space, always at a premium, is oftentimes unconducive to work or conferences for part-timers, and frustrating to the true professional. Options to participate in group insurance programs are a welcome benefit to some part-timers, even if they must pay the premiums. Finally, inclusion in any faculty organizations, meetings, or social events can go a long way in creating a pleasant work environment for the part-time faculty and especially in improving the trust of the full-time faculty for their part-time co-workers. Without these, it is possible to work for years at an institution and remain socially isolated from the rest of the staff.

A wise administrator knows that those things he can do to create a better work environment for this employees can greatly increase morale. If this can be done with little or no cost to the institution, and only some slight effort on his part, why not?

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YES—FOR SEVERAL REASONS

JOSEPH BRANNON

When one considers the above question from the position of those who manage the budget in academic institutions, especially in these days of Reagonomics, a rational response of "No" could justifiably be presented. However, when one evaluates the increasing professional contribution that part-time staffers are now making to academic excellence, a logical response becomes "Yes" for several reasons.

First of all, there is the question of academic credibility. For too many years the role of the part-time staffer in the university has been marked with an air of intellectual inferiority. His part-time status in the minds of many becomes a statement of professorial instability and inadequacy; fortunately, this is not the case. The modern part-time staffer carries a briefcase labeled with graduate degrees and filled with copies of his published articles and letters of commendation from both students and institutions testifying to his academic credibility. He is more often a part-time staffer by choice and prides

himself on his "self-employed" image. To grant him fringe benefits appropriate to full-time staff would be an institutional statement as to his academic worth.

Secondly, the granting of fringe benefits becomes a tool in the recruiting process. When one examines the course offerings of academic institutions and the full-time faculty available to instruct, it becomes evident that part-time staff in many situations is now outnumbering full-time staff. The competition for competent, qualified instructors is obvious in the want-ad sections of all daily newspapers. A fringe benefit package added to the salary scale would be a windfall in the brochure of personnel directors who seek to fill the academic chair with competent staff.

Thirdly, the granting of fringe benefits becomes a statement of the institution that "We care." The goal of education is not just to make persons functional in the modern world, but to make them caring, concerned persons in this vast technological age. There could be no greater evidence of caring then the institutions relieving the pressures of the threat of a medical disaster from the shoulders of its own employees, be they part- or full-time.

Without a doubt the reasons for providing fringe benefits to part-time staff outweigh the reasons not to. What those benefits should be has yet to be determined. However, educators who are constantly sensitive to the needs of quality education will provide us with the answers in the near future.

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PRACTICUM

USE OF MICRO-COMPUTERS IN ENGINEERING TECHNOLOGY INSTRUCTION

Monty Coffin

The importance of an emphasis on computer applications in engineering training has been fully recognized by Mr. Eugene Hartman, Chairman of the Engineering and Natural Science Department, Clark Technical College. With the full support of the college administration, facilities have been provided to allow such a goal to be realized. Monty Coffin shares this with us.

When the entering class of Engineering Technology students at Clark Technical College in Springfield, Ohio, began the fall term of 1982, to the surprise of many of them, their training in the operation, programming and application of computers started during their first week of classes. The skills developed in this introductory course will be put to use in many of the engineering, mathematics and physics courses which follow. Upon completion of their program of instruction approximately two years later each graduate will be extensively trained in the use of computers applied to technical areas.

The importance of such emphasis on computer applications in engineering training has been fully recognized by Mr. Eugene Hartman, Chairman of the Engineering and Natural Science Department; and, with the full support of the college administration, facilities have been provided to allow such a goal to be realized. The feasibility of providing such a facility has been enhanced by the availability of amazingly capable and low cost "stand alone" micro-computers to supplement terminals tied into a central computing system.

The hub of computer activity is a spacious computer laboratory where terminals to the central facility are available as well as a number of micro-computers and peripheral equipment including printers and plotters. The flexibility and portability of the micro-computers allows their detached use in classrooms and in other engineering laboratories.

Although the 1982-83 academic year is the first in which computer training has been initiated during the student's first term, the expanded facilities became available during the 1981-82 academic year and were put to use in several engineering and mathematics courses. Prior to the 1981-82 year each student was required to complete a course in engineering computations using computers, but limited facilities prevented widespread use in other engineering and technical courses.

The most noteworthy result of the 1981-82 academic year experience was the very favorable reaction of the students to the use of the micro-computers. During the spring term the author assigned individual computer projects in two courses: Mechanical Instrumentation and Machine Design. In the end of course evaluation, 94% of the students strongly supported these projects as being worthwhile elements of the courses. As a whole, the students worked diligently on these projects and seemed to thoroughly enjoy using the small micro-computers. Only one student out of 51 failed to complete the assigned project.

The experience at Clark Tech to date has been that the more the computers are used in engineering technology instruction, the more uses are found for them. Some of the areas in which they are currently being used, or for which use is definitely planned, are outlined in the following paragraphs.

The introductory course on computers will take the students through several simple programs with "hands on" experience in the operation of the micro-computers and the preparation of simple programs. They will be given the opportunity to further expand their programming skills by using interactive self-instruction training which is available in the form of computer programs.

Self-instruction programs will also be available for interactive remedial drill in basic mathematics. The micro-computers offer a low-cost supplement to remedial instructions and to the limited individual tutoring that is available.

Because of their portability the micro-computers have been put to very effective use as outstanding visual aids for classroom demonstrations.

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Typically, the computer is taken into a mathematics class to display graphs of various functions and the effects of parameter changes, to accomplish numerical integration showing the effect on accuracy of varying step size, and to graphically display the solution of a differential equation; for example, a spring mass system and the effect of varying damping.

Course projects are becoming a part of most engineering courses. These projects are normally assigned at the start of the term with the student being given until the end of the term to develop a working program. Individual projects are assigned in such courses as Strength of Materials, Machine Design and Mechanical Instrumentation; group projects are assigned in such courses as Fluid Mechanics, Thermodynamics and Fluid Power. The groups are normally comprised of three or four students.

The effectiveness of laboratory instruction can be enhanced by providing instructions to the students through interactive computer programs. As an example, several laboratory exercises in a course on Electrical Systems are presented through computers. The portability of the micro-computer allows easy movement to the electrical systems laboratory. Instructions on the conduct of the exercise are interspersed with self-test questions and graphic displays.

Students are introduced to computer aided drafting and design through the micro-computer used in conjunction with a basic plotter. In the basic drafting course, students are required to prepare computer instructions to accomplish automated drafting. The plotter serves many other useful purposes. An in-house program developed by Mr. Hartman allows not only the plotter of any "mathematiacally definable" function but also the graphical solution for the intersection of any two of those functions. The micro-computer/plotter combination also allows the very quick and low cost preparation of such items as pie charts, bar graphs and line graphs. Transparencies can be made for vugraph presentations. These can, of course, be used for either administrative purposes or for classroom instruction.

In the instruction of certain courses it is very helpful to have standard programs available for student use. For example, in the courses in electric circuits it is very important to have a matrix inversion program available to solve the large systems of simultaneous equations that are developed in certain circuit problems. A program developed by Mr. Hartman that will accommodate up to 18 equations with 18 unknowns is used in the electric circuit courses. As another example, in the sequence of surveying courses it is very helpful to have programs using double precision to process the data recorded in field exercises.

Standard programs such as those described above are generally available on either the large central computer or the micro-computers. Experience to date has supported the advantage of having micro-computers as a back-up to a central computing facility. During the conduct of courses in which computer use was essential, a severe electrical storm knocked out" the lines to the central computer facility making the facility unavailable for an extended period of time. The "stand alone" features of the micro-computers became very advantageous. All computer related work was transferred to the micro-computers and the courses proceeded smoothly and without interruption.

Another example of micro-computer use in an engineering department is for administrative records such as advisor records on students. Each instructor in the Clark Tech engineering department normally advises about sixty students. For some time the author has maintained a notebook with a page for each advisee; these records include academic progress as well as information that reflects a personal interest in each student (e.g. hobbies, part-time or full-time work, family, hometown, etc.). It is believed that such an approach has advantage in student retention. These student records are being transferred to micro-computer diskette where they will be stored and maintained.

One of the most effective and active uses of the computer facility is the "open laboratory" feature. The laboratory is open approximately fourteen hours per day. Certain classes are conducted in the laboratory (e.g. Engineering Computations) and blocks of time are reserved for certain other courses. During the remaining time students are allowed to schedule time on the computers. During this open laboratory time supervision, security and assistance is provided by student workers. One strict rule is that the computers not be used for video games.

In concluding, it might be well to answer the question as to why this strong emphasis on computers in engineering technology programs. The primary goal is to increase the job opportunities for our graduates and to add to their effectiveness on the job. Again, with the current availability of low-cost computers with outstanding capability it is expected that virtually every technical position will in some way involve the use of computers. By making computers a "way of life" during the two years of technical college training, our graduates will be ready to step into such positions with a sound knowledge of the use and capability of computers in engineering applications. The outstanding success that our graduates have enjoyed in the past in finding employment should be further enhanced by this new emphasis on computers.

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REACTION

The JOURNAL encourages letters and articles in reaction to its contents, its policies, and its activities.

RESPONSE TO "MISSION FIRST"—RICHARD LIBBY

RITA J. BOVA

Spring's OATYC JOURNAL presents an interesting dilemma: "When the 'Tech' monies are low, should the Humanities be the first to go?" The dilemma exists primarily because the Humanities are seen as a "frill" to a technical education, and when times are lean, these "frills" can be cut with fewer consequences than the other, "more basic" courses. Certainly, most of the technical schools indicate such a perspective, as Libby (OATYC JOURNAL, Spring 1982) points out, "A brief survey of the catalogues of the 17 colleges in Ohio indicates that fewer than a half dozen offer courses which could be classified as the Humanities" (p. 16). These numbers suggest that the Humanities courses are not seen as an important part of the curriculum.

But are the Humanities a "frill" and gratuitious? I say no—and for some very important reasons for the technical school graduate. The Humanities both develop and extend the technical student. First of all, Libby's definition of the Humanities' curricular role "is to present man's cultural heritage, to cultivate a sense of aesthetics, and an appreciation of that heritage" (p. 16). But the study of the Humanities involves more than this—it emphasizes and encourages ethical values, creativity, and imagination.

As the Rockefeller Foundation found in its survey (1980), "Few strategies can rival the time-honored practice of identifying with characters in literature and history who, caught in ethical dilemmas, have had to make a choice." The Humanities can also encourage liberal and imaginative thinking. As E. J. DeLattre writes in "The Humanities Can Irrigate Deserts" (CHRONICLE OF HIGHER EDUCATION, 1977), "Liberal Arts were once called liberating arts, not only because 'the Truth shall make us free,' but also because one is ever free to do anything that he cannot think of." The Humanities also encourages the technical entrepreneur who can go forward to creating new inventions and uses of the technology—equipped with technical skill and inspiration. Is not "Star Wars" a modern version of good versus evil set in a technological tomorrowland?

Besides inspiring creativity and reinforcing values, the Humanities also encourages flexibility. In a world of rapidly changing technological inventions, the ability to change and grow will be as important as the fundamental, technical skills themselves. Upward mobility will be marked by humanistic adaptability as well as technological training. In discussing this phenomenon, Adams (1972) argues that students who graduate from occupational programs, which include no general education courses, are frequently faced with occupational immobility. Even Walker in the "Quality of Technical Training First" (OATYC JOURNAL, Spring 1982) admits that:

> If a technician expects to be considered for advancement, he must meet the requirements that the employer has set—which usually includes improvements in social, cultural, political, and lingual aspects of the job (p. 19).

Ironically, the technical student's grasp of the Humanities will alter far less than his/her training in such rapidly changing technogies as computer science or electronics. As such, these students' ability to change and grow will be a vital part of their careers—and could make or break them in future job settings. To summarize with a quotation from Albert Einstein, "Imagination is more important than knowledge."

Rita J. Bova
Communication Skills
Columbus Technical Institute
Columbus, OH 43215

INFORMATION FOR PROSPECTIVE CONTRIBUTORS

The *Journal* encourages submission of material for any of its sections by faculty, staff, administrators and/or trustees of any of Ohio's community, general and technical, junior, regional and technical campuses. The *Journal* is particularly receptive to articles of general professional importance in the areas of administration, instruction, and baccalaureate or technical studies for two-year institutions.

There are fifty solicitors of editorial material listed here. Contact your campus solicitor or one nearest you to inquire about submitting a specific manuscript.

Manuscripts must be typed double-spaced and of approximately 1,000-3,000 words in length. All submissions must be accompanied by a stamped self-addressed envelope for return. Art work must be black and white. Photos glossy; tables and drawings on 8½ by 11 paper. The name and address of the contributor should be on the back of all art copy.

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Submission deadline for the next *Journal* is February 1, 1983.

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2. To foster cooperation and communication between member institutions.
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4. To identify and improve the status, prestige and welfare of all two-year colleges in Ohio.
5. To cooperate with other Ohio agencies, organizations, colleges and universities in research and activities that promote the effectiveness of higher education in Ohio.
6. To promote articulation among the institutions of education in Ohio.
7. To take such action as will increase the contribution of the two-year colleges to the total education processes in the State of Ohio.

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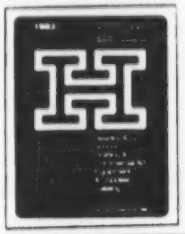

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FRIDAY, OCTOBER 22

10:00 a.m.- 1:30 p.m.	Registration
10:00 a.m.- 6:30 p.m.	Displays of textbooks, educational materials, and instructional equipme
	Lucheon
11:30 a.m.- 1:30 p.m.**	Welcome
	Luncheon Speaker
	Business Meeting
1:30 p.m.- 3:00 p.m.	Concurrent Sessions I**
3:15 p.m.- 4:45 p.m.	Concurrent Sessions II**
5:00 p.m.- 6:30 p.m.	Tour of the Stocker Center and LCCC Campus
7:00 p.m.- 8:30 p.m.	Banquet, Ramada Aqua Marine
8:30 p.m.-	On your own

SATURDAY, OCTOBER 23

8:00 a.m.-9:00 a.m.	Breakfast-on your own
8:30 a.m.-9:00 a.m.	Late Registration
9:00 a.m.-10:30 a.m.	Concurrent Sessions III**
10:45 a.m.-12:15 p.m.	Concurrent Sessions IV**
12:30 p.m.- 1:45 p.m.	Luncheon
	Luncheon Speaker
	Closure
	Short Meeting of New and Continuing Members of the Board of Directo

*Agenda subject to change
**See attached pages

PARTIAL LIST OF EXHIBITORS
Friday, 10:00-6:30

Carolyn Craft, "Seeing Is Believing"—a sound-on-slide show

Charles E. Merrill Publishing Company—textbooks

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VOL. VIII NO. 2 SPRING 1983

THIS ISSUE

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A Comprehensive Planning Process

Summaries: The 1982 Conference Presentations

High Tech, Higher Education, and Ohio

PLUS ONE

Development Education: A State Perspective

FORUM

Issue: What is the Role of Developmental Education on Ohio's Two-Year College Campuses?

PRACTICUM

What Works Best in Developmental Education

REACTION

Response to Rita Bova: Marketing the Humanities
The Science Fiction Approach

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—A newsletter which informs members of the proceedings and activities of OATYC and of Ohio's two-year campuses;
—The *Journal* which provides an opportunity for publication and exchange of scholarly views and concepts;
—Conference and workshops providing opportunities for professional development, visits to other two-year campuses, presentation of papers, and socialization with other two-year campus personnel.

Purposes:

—To provide a forum in which all state-assisted, two-year campuses can meet to discuss and resolve mutual problems;
—To foster cooperation and communication among Ohio's institutions of higher education;
—To provide the viewpoint of the state-assisted, two-year campuses to the Ohio Board of Regents and to the State Legislature;
—To identify and improve the status, prestige, and welfare of all state-assisted, two-year campuses in Ohio, and to other activities which will increase the contribution of state-assisted two-year campuses to Ohio's total educational process.

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JOURNAL
OF THE
Ohio Association of Two-Year Colleges

VOL. VIII NO. 2 SPRING 1983

The *Journal of The Ohio Association of Two-Year Colleges* is published by the Association to provide the two-year colleges of Ohio with a medium for the sharing of concepts, methods and findings relevant to the two-year college classroom and to provide an open forum for problem discussion and review.

Subscription is part of OATYC active, associate, or institutional membership. However, single copies of the "Journal" are available at $3 each. A yearly subscription is available for $6 to persons or organizations who do not want membership in the OATYC. Postage is prepaid on all orders within the U.S.; $.50 per year is added for Canada, $1 per year for all other foreign countries. Communications regarding orders, special subscriptions, single copies, advertising, and permission to reprint are to be addressed to:

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OATYC JOURNAL, SPRING 1983

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COMMENT

John Elder

ACCESS AND RETENTION: MEETING THE PROBLEM

Developmental Studies programs provide a valuable service to institutions as an avenue through which student access and retention are realized. Ohio's open admission colleges are recruiting and admitting many "high-risk" students. Any high school or GED graduate is entitled to admission to any public, state supported college or university. Also, these institutions have expanded educational opportunities to the full spectrum of learners—rich and poor, black and white, male and female, young and old, the able and not so able, the mobile and not so mobile. Open admissions and increased access has drawn to our institutions many students who are not adequately prepared. This presents a problem, but not a new problem. Underprepared college students are not a phenomenon of the 1970's and 1980's. As Martha Maxwell points out in *Improving Student Learning Skills*, Harvard first offered a basic writing course in 1874. However, current conditions in Ohio, open admissions and greater accessibility have increased the numbers of underprepared students thus causing more attention to be focused on the problems of the "high risk" student.

Another condition or trend is impacting our colleges. Adult students, those twenty five (25) and beyond, are registering in increasing numbers at two year campuses, while the number of high school graduates is decreasing. Many of these older students need assistance in acquiring and refreshing skills needed for academic success.

Currently, there is also more attention and concern for retaining students in college. In 1980 the Carnegie Council on Policy Studies in High Education indicated that the college-age population has declined substantially in the last decade and will continue to decline for the remainder of the 1980's. Therefore, these new students we are attracting, whatever their level of academic skills, will not soon be replaced by better qualified younger students. Faced with this dilemma institutions would do well to develop or strengthen programs which would help retain all students. Developmental Studies programs are one of the

key programs for retention of students and for providing the access to academic degree programs.

Are Developmental Studies programs working? Current research indicates that Developmental Education and Learning Assistance Centers provide definite benefits for both students and institutions. A summary of some benefits is shown below and were taken from a current *Information Bulletin* published by National Association of Remedial/Developmental Studies in Postsecondary Education (Jan., 1983):

1. Developmental education and learning assistance programs are effective in *improving students' basic skills*. The research suggests that students who participate in such programs show consistent gains from pre-test to post-test on standardized measures of basic skill development (Boylan, 1983).
2. Developmental education and learning assistance programs are effective in *improving students' grade point averages*. The research suggests that students who participate in such programs show consistent gains in grade point average following participation. Furthermore, these gains are usually *far superior* to those shown by similar students who do not participate in developmental education or learning assistance programs (Boylan, 1983).
3. Developmental education and learning assistance programs are effective in *improving retention* for students who participate in them. The research suggests that students who participate in such programs are retained to a far greater extent than similar students who do not participate (Starks, 1982).
4. The improved retention of students who might otherwise be lost to an institution means improved *institutional revenue* from tuition, fees, FTE subsidies, and longer-term residential occupancy.
5. Improved basic skill development is cost effective. It results in:
   -fewer students having to repeat classes
   -fewer incompletes in regular curriculum courses
   -less time spent by regular curriculum faculty in remediating basic skills deficiencies.
6. Skill gains associated with participation in developmental programs improve students' potential for meeting quality *academic standards*.
7. The presence of a developmental program is useful for *recruitment* purposes. It means that the college will be responsive to the needs of incoming students who may require assistance in developing their skills or adjusting to college.
8. Developmental programs provide and manage a variety of instructional *support services* (such as student counseling, monitoring, tutoring, and individualized study materials) that would otherwise have to be provided or monitored by academic departments.
9. Developmental programs lead to increased *student satisfaction* with their college experience. Research suggests that students participating in developmental programs frequently rate their experiences in those programs as among the most satisfactory of their college careers (Donovan, 1975).
10. While develpmental education does cost money, the costs *per student are usually lower* than the per-student costs of other academic or student services. Furthermore, these costs are usually offset by the resulting cost benefits of improved retention.

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It has become evident that a strong Developmental Studies program in an institution can help to retain students and provide the assistance students require to reach their educational goals. If we are to have an "open door" then we owe it to our clientele that this does not become a "revolving door," and to provide for them a program which will assist them in staying in school.

John Elder, Chairman
Developmental Studies Dept.
Sinclair Community College
Dayton, Ohio 45402

ANNOUNCING

The Ohio Faculty Senate Network Meeting

Hosted by Sinclair Community College

Friday, May 13, 1983

10:00 a.m.-3:15 p.m.

Alumni Lounge—Room 7342

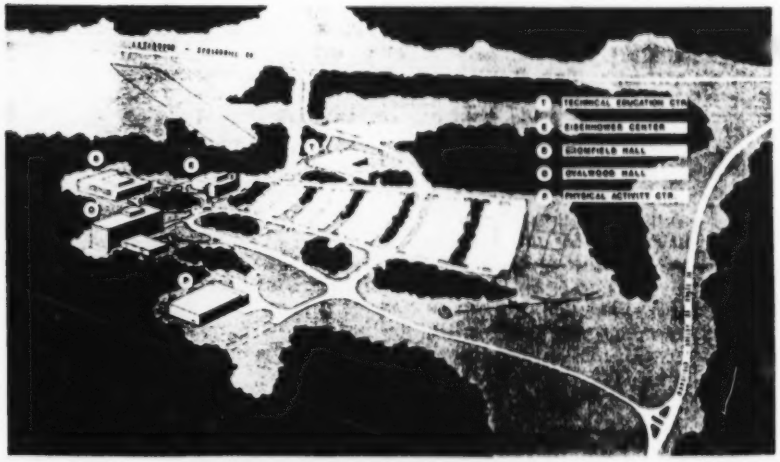
All Two-Year Colleges of Ohio Invited

TEXT

FOCUS: NORTH CENTRAL TECHNICAL COLLEGE A COMPREHENSIVE PLANNING PROCESS

G.M. RUSTAD

In this edition, the Journal takes you to visit the two-year college campus of the North Central Technical College located in Mansfield—a comprehensive planning process in action.



NORTH CENTRAL TECHNICAL COLLEGE
Mansfield, Ohio

North Central Technical College was operated as the Mansfield School of Technology by the Mansfield Board of Education from 1961 through 1968. The school was originated to provide students with career skills for employment in the Mansfield area. During these years enrollment grew from 26 to 157 students.

In 1968, as a result of new state legislation, a technical college district (including Ashland, Crawford, and Richland Counties) was created, the school's name was changed to North Central Technical College, approved by the Ohio Board of Regents as an institution of higher learning and a Board of Trustees was formed.

The Board of Regents encouraged the College and The Ohio State University - Mansfield, the area's two state-supported institutions of higher education, to locate on the campus, thereby making more efficient use of buildings and services, and offering students and the community better cultural events and extra-curricular activities. The two institutions developed a cost-sharing arrangement to realize these goals. On September 14, 1970, North Central Technical College, with 422 students, moved onto the Mansfield Campus with OSU. Both colleges share a 600-acre campus with excellent facilities for all students. From modern, well-equipped laboratories, to a comfortable Student Union and cafeteria, to a new Physical Activity Center, students are able to enjoy their learning experiences. Students of all ages, from 16-70, can participate in the many educational and social activities provided on the Campus.

NCTC provides associate degree programs in Accounting, Business Management, Data Processing, Drafting & Design, Electronic Engineering, Industrial Management & Supervision, Law Enforcement, Mechanical Engineering Technology, Mental Health and Mental Retardation, Nursing (Registered), Radiologic Technology, Therapeutic Recreation, Retail Management, Sales and Marketing, and Secretarial Science. One-year programs are available in Practical Nursing and Respiratory Therapy.

In addition to regular programs, NCTC provides various workshops, seminars, and short courses to area industries, businesses, and organizations. Many of these instructional activities are scheduled at the employer's site.

All organizations go through various stages of growth and development. The first two decades of the College's history had a focus on specifying mission, developing primary and support programs, hiring faculty and staff, and developing a process of institutional management. In 1975, the College

undertook a self-study for accreditation from the North Central Association of Colleges and Schools which led to the award of Unconditional Accreditation for five years commencing on March 27, 1976. In April 1981, the Commission on Institutions of Higher Education of NCASC indicated that the College was awarded seven years of accreditation with the next comprehensive evaluation scheduled for 1987-88. In addition, several programs are accredited by various specialized accrediting organizations. The College was awarded membership in the Ohio College Association in 1973.

Enrollment at NCTC has consistently increased. Current enrollment of 2,000 students has doubled in only seven years.

NCTC is currently involved in a program which will remodel many of its

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laboratories. Over $1.5 million has recently been invested in high technology equipment. Major items include computer aided design (CAD), computer numerical control, programmable controllers, hydraulic trainers, main-frame computer, micro-computer development system and devices which deal with electronic data acquisition.

NCTC has adopted the following essential purposes:

1. To offer students programs and courses which serve the needs of the general community.
2. To teach basic theories and practices which encourage students to become competent within applied business, engineering, health, and public service technologies.
3. To offer associate degree programs in applied business, engineering, health and public service technologies and certificate programs which meet various job requirements.
4. To develop agreements with other institutions in areas such as advanced placement, experiential learning, and transfer credit.
5. To provide an opportunity for life-long learning by offering courses which meet needs such as skill upgrading, retraining, career change, redeveloping competencies, and advancement while encouraging personal and interpersonal effectiveness, values clarification, and human growth within the parameters established by associate degree and certificate programs.

6. To act as public education resource in the training of technicians, skilled craftsmen and para-professionals for business, industry and the professions.
7. To provide courses during day, evening and weekend hours to accommodate traditional and non-traditional students of diverse backgrounds, ability and ages.
8. To expose students to a quality faculty, along with appropriate facilities and equipments, which effectively implement the College's mission.
9. To encourage professional growth within the college community.
10. To encourage self-direction, personal responsiblity, critical reasoning, self-awareness, and effective communication of these qualities with other members of a changing society.
11. To encourage and develop in students effective communication skills, both written and oral.
12. To maintain admissions policies consistent with Ohio statutes and educational regulations.
13. To maintain a comprehensive student services program.
14. To review mission and purposes periodically, in response to community needs.

At the backbone of the College's mission and purposes and its future development is the planning process. All college departments have organized their plans around seven major college goals.

-Mission Attainment
-Functional Relationships
-Qualitative Improvement
-Program Development
-Professional Development
-Public Relations
-Funding Sources

As a result of the planning process, the college has identified its three highest priorities: Human Resource Development, Computer Literacy and College Marketing. These priorities find their way throughout the entire budgeting process and finally into implementation.

NCTC is convinced that its continued development will rest upon the effectiveness of the comprehensive planning process.

G.M. Rustad
Vice President for Administration
and Student Services
North Central Technical College
Mansfield, OH 44906

SUMMARIES: THE 1982 CONFERENCE PRESENTATIONS

ATTENTION!
1983 AUTUMN CONFERENCE
ARTICULATION—IT'S EVERYBODY'S BUSINESS

The 1983 Autumn Conference of the Ohio Association of Two-Year Colleges will be held November 3 and 4, 1983, at Lakeland Community College in Mentor, Ohio. The theme of the conference will be "Articulation" - the planned linkage of curricula, services, and experiences as students move from one system to another - provides a framework for all that we do. The 1983 Autumn Conference offers a forum for the discussion of ideas, techniques, model programs, and other contributions to the improvement of the internal and external articulation of the two-year campuses.

We urge you to join us. For those of you who missed the 1982 OATYC Conference at Lorain County Community College, we provide the following summaries:

PRESENTATION: "Two-Year Technical Programs in a University Setting"

SUMMARY: The Panel discussion focused on the two-year associate degree Business Technologies program areas of Office Management, Business Management, Accounting, and Data Processing. Each individual program area's goals, course content, and learning activities were discussed with special emphasis given to the ways in which students with varying skills, educational background, and work experience were accommodated within each program. Discussion centered on the variety of instructional materials and learning activities provided in the two-year associate degree programs at Kent State. Such topics as internship programs; small group seminars; "hands-on" training on technical equipment; field trips; job placement; student follow-up programs; and workshops were outlined and reviewed by the group members. Plans for future development and emphasis for the 1980's were discussed as well as problem areas.

Bonita Stoufer, Assistant Professor
Robert Loth, Assistant Professor
Sharon Wathen, Assistant Professor
Jack Marino, Assistant Professor
Kent State University, Trumbull Campus

PRESENTATION: "How to Write Perfect Course Outlines"

SUMMARY: YOU can write better course outlines. The system uses a 3 part course outline: (1) a course summary sheet that identifies course title, teacher, text, teaaching materials, grading procedures, and class policies; (2) a schedule sheet that divides a course into 25 minute segments; (3) an objectives list that specifies goals week by week. To plan a course using this system, you need to draft; brainstorm; create a schedule—evaluate, substitute, combine, rearrange; transfer the finalized schedule to paper. From that schedule, write your course objectives week by week and encourage students to follow both schedule and objectives as study guides. You may want to argue that objectives should come before schedule. My experience has been that as educators we have zillions of ambitions (objectives) which get abridged and edited by the clock and the calendar. Schedule what you *can* cover and set objectives accordingly.

Carolyn R. Craft
Associate Professor of Core Education
Jefferson Technical College

PRESENTATION: "Increasing Enrollment with Cooperation from Licensing Agencies and Business Associations"

SUMMARY: Lorain County Community College's Business Division cooperates with the Ohio Division of Real Estate in administering courses required for licensure and those certified for "Real Estate Continuing Education." It is also approved by the Ohio Association of Realtors to offer "Graduate, Realtors' Institute" courses leading to the G.R.I. professional designation. The Institute of Financial Education has co-operated in creating LCCC's Certificate of Proficiency in Savings and Loan Education and has approved many of our Real Estate and Banking courses for their Degree of Distinction and Diploma of Merit. LCCC's Banking and Finance degree candidates benefit from courses that also apply to the American Institute of Banking (A.I.B.) Certificate and Diploma Programs. The Banks and Savings and Loans pay their employee's tuition and most students average six hours of coursework per quarter. The Real Estate licensees are Independent Contractors and have no tuition compensation. All three areas overlap allowing not only course viability but specialized training applicable to these industries.

Margaret E. Sprencz
Instructor, Business Administration
Lorain County Community College

PRESENTATION: "Margaret Mead Visits the Machine Shop"

SUMMARY: This presentation is based on a field of study of "technical talk" in which I have confronted the discourse of *planning* in the work setting of a complex technological organization. Technological work, as used here, comprises an ensemble of socially organized practices in which planning plays a controlling role. Planning is available as a studyable social phenomenon where the social character of it is intimately part of the moment-to-moment doing of technology. I have argued that the analysis of *in situ* technical discourse as it is observable in planning requires a detailed understanding of the work setting in which an engineer and technical writer engage in discourse during the production of a technical document. When we examine the text of a planning sessions, or any other naturally occurring linguistic interaction, we may be stuck first by the seeming disorder and lack of structure. Yet we know that these sessions represent successful interactions in which participants understand each other. I have suggested that this research may be useful for students of communication in business and technical programs as well as for teachers of technical and business communication.

Sharon Louise Kindt
Instructor
Lorain County Community College

PRESENTATION: "Program Review and Evaluation"

SUMMARY: A couple of years ago, Columbus Technical Institute recognized the need to develop a systematic approach to program review and evaluation. The initial step in fulfilling this need was the formation of a Program Review & Evaluation Task Force, composed of faculty and administrators. The task force's first major accomplishment was to agree to establish criteria that meet two guidelines: (1) they must be broad enough so that they can be applied to all programs; and (2) they must use a data base that already exists, or can readily be developed. After considerable debate, twelve (12) criteria were established to evaluate the technical programs at Columbus Technical Institute. The scores on twelve criteria were used to "screen out" programs in need of additional review. Three gauges were used in screening programs: (1) Those falling below the overall standard; (2) those which failed to

meet the standard of five (5) or more of the twelve (12) criteria. (3) those which failed to meet the standard on three (3) or more of the five (5) most important criteria. The department chairpersons of the "screened" programs were interviewed by the Program Review and Evaluation Committee to determine what, if any, extenuating circumstances may have existed to cause the program to score below the minimum on specific criteria. After the interview, reports were prepared for each program reviewed and distributed to the appropriate department chairperson, dean, and Vice President for Academic Affairs. The reports included recommendations such as: the program meets the standard and no further actions is needed; the program does not meet the standard and needs to develop a plan to improve ratings on the criteria; or if the program does not meet the standard within the next two years, it should be considered for phasing out. The task force is currently working on a model for review and evaluation of the general and developmental education programs.

Robert Thompson
Administrative Assistant to the
Vice President for Academic Affairs
Columbus Technical Institute

PRESENTATION: "A Case for Cases: An Approach to the Teaching of Writing"

SUMMARY: Recent composition theory and research suggests that if writing teachers intend to portray writing as a communicative act and not merely as an academic activity, they must create writing assignments that require students to be sensitive to the demands of audience and situation and the larger consequences of their writing. The case approach emphasizes audience, purpose, situation, problem-solving, and critical analysis and, as a result, is superior to traditional product-oriented approaches.

Louis M. Suarez
Acting Chairman, Division of Language and Humanities
Lorian County Community College

PRESENTATION: "A Report on Academic Computing at LCCC"

SUMMARY: A committee was defined during the Fall of 1979 to develop recommendations for a campus wide academic computing facility. After a year and a half a report was submitted and a second committee established to select a computer system(s) to implement the report and to provide a current system for administration. A Honeywell DPS 8/44 was selected and installed during the summer of 1982. Sixty-five student terminals and four printers were provided in four laboratories located around the campus. The computer should serve the academic community in a manner consistent with that of the library and learning resources center. Training is being provided for the entire faculty.

Herbert E. Peebles
Chairperson, Division of Science and Mathematics
Lorain County Community College

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PRESENTATION: "A Study of Extrinsic Rewards and Their Effect upon Intrinsic Motivation"

SUMMARY: Motivation as a research domain is a fairly recent phenomenon. As business thinking and organizational analysis became oriented to the human relations school of thought in the late 1930's, behavioral science turned its attention to the development of motivational theory. Recent studies of student goals suggest that educators currently may not clearly perceive the parameters of student motivation and value priorities. Therefore, the necessity for better understanding of motivation as an educational concern seems indicated.

Shirley Sprague
Language and Humanities Faculty Member
Lorain County Community College

PRESENTATION: "Anti-Humanist Myths in Education"

SUMMARY: Two mistakes in thinking about values have become popular myths: strictly identifing (1) values with tastes and (2) agreement and disagreement as the standard for correctness in opinion-making. Both errors contribute to the general decline of respect for the humanities. The first by tacitly assuming subjectivism and relativism in evaluation, and the second by encouraging superficiality of thought. Moreover, the social studies disciplines, riding the wave of science's success in the physical world, have assumed the role of normative legislator and, accordingly, intrude into areas of scholarship traditionally reserved for the humanities. Humanists may oppose this intrusion by re-affirming the intellectual autonomy of the individual and demonstrating the success of reason in determining value.

Donald L. Smith
Professor
Lakeland Community College

PRESENTATION: "Computer Literacy Improvement Project for Staff (CLIPS)"

SUMMARY: The presentation provided an overview of a project underway at each of the three campuses of Cuyahoga Community College. The project, which provides an opportunity for faculty, administrators, and staff to become computer literate, allows participants to have the use of a personal computer at home for one quarter. Participants attend a two-hour class once a week in exchange for the use of the computer. Topics covered vary, but include the use of the College's "electronic mail" system; text-editing capabilities available on the mainframe; demonstrations of LOGO, PILOT, and BASIC; Visicalc; and the identification of additonal resources available within and outside the College

Jan H. Jonas
Dean of Instruction and Supervisor

Susan C. Bahr
Academic User Services
Cuyahoga Community College

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PRESENTATION "High Technology Training at Lorain County Community College"

SUMMARY: Productivity in the United States has fallen steadily behind the levels needed to maintain or improve the current mean standards of living. Many basic industries are too obsolete and costly to compete in the world market. The major edge that the United States still holds is in the areas of information, knowledge and expertise. Emphasis on these areas is essential if future conditions are to improve. What is often called the "second industrial revolution" or the "information revolution" offers the greatest potential for United States economic viability. The Lorain County Community College High Technology Center will assist in providing and delivering training and education on a broad base in state-of-the-art technologies. The facility will be complete in about one year; some programming will start within the next few months. This movement toward information and knowledge offers a great opportunity to the educational system, but only if it is sufficiently perceptive and flexible to deal with the challenge.

Walter Edling
Dean of Instruction
Lorain County Community College

PRESENTATION: "Promoting Library Usage Painlessly"

SUMMARY: Maintenance of quality is one survival strategy for colleges in the 80's. This strategy demands increased library usage so that students may learn basic library skills and research techniques as well as assume more responsibility for their own learning. Three keys to promoting use of the library are faculty awareness, cooperation, and flexibility in assignments. Faculty must accept a primary role in promoting library usage by assigning "search strategies" or other exercises for familiarizing students with the library, as well as assigning research papers and projects.

One research project that has been well received at Marion Technical College is the Personal Goals Project in CM 116, Oral Communications. This project allows students to select a communication goal from ten suggestions or one of their own choice. They write a one-page proposal (on the provided form) specifying objectives, proposed reading list, and plan of application, including the method of recording data: log, tape recording, videotaping, or combination thereof (for two or three weeks). After the application is completed, a report is submitted to the instructor.

Betty Dietch
Instructor
Marion Technical College

PRESENTATION: "Promoting Technical Education at the Post-Secondary Level"

SUMMARY: The presentation focused on a variety of activities—special programs, on-going activities, and instructional practices—that are effective in promoting and selling technical education at the postsecondary level. Discussion centered on the impact of these types of activities on three groups of individuals—people within the educational institution itself, business people from the local community, and individuals from the community, secondary school systems, and professional clubs and organizations. Reviewed were different recruitment activities such as Career Days, Career Options, Coffee and Coke Programs, Student Peer Advisor Programs, workshops and seminars developed for the business community, secondary teachers and students.

Bonita Stoufer
Assistant Professor
Kent State University, Trumbull Campus

PRESENTATION: "Recruitment and Retention of Adult Students"

SUMMARY: To successfully recruit older students, a college must conduct demographic and economic studies. The recruitment strategies for adults should be based on a "machine gun" approach, aiming each effort in rapid succession to the group or groups identified through the demographic and economic studies. The successful retention of adult learners must necessarily follow the operational implementation of the strategic decision to recruit older students by providing services and opportunities that meet adult needs and involves them personally in the college.

Phyllis Thompson
Coordinator of Developmental Educational
Central Ohio Technical College

Glenn Bayless
Instructor, Adult Basic Education
Elyria City School

PRESENTATION: "The Evolution of the Two-Year Campus Organization within Parameters of Leadership, Planning for Change, and Controlling"

SUMMARY: As a relatively recent arrival on the scene of higher education in Ohio, the two-year community colleges, technical colleges, and branch campuses have had a unique opportunity to experience organizational development. Planning for the future, managing the present, and evaluating the past have been activities which have often resulted in change or modification of the two-year campus organizational structure. Also, by not being steeped in tradition, and being readily responsive to meeting student needs, the two-year campus organization has had the ability to maintain flexibility and to be contemporary.

Paul E. Shumaker
Provost
Cuyahoga Community College

PRESENTATION: "The Local Levy"

SUMMARY: There is no magic formula for passing a levy. What works for Community "A" might not necessarily be valuable in Community "B."

Moreover, various factors such as: unemployment, harsh economic conditions, and apathy can all influence voters. Some necessary steps in passing a levy are as follows: (1) Develop a time schedule for advertising and speeches; (2) raise money for advertising; (3) select a distinguished and respected individual in the community as chairperson of the Levy Committee; (4) seek endorsements from local civic, religious, social labor, and business organizations, especially in letter form for printing in local newspapers; (5) stress you are not a "black tie" college but a people's college and you exist for the sons and daughter of the working people; (6) obtain as much free time as possible on radio and television; (7) have merchants endorse the levy in their newspaper advertising; (8) have the Board of Elections designate your college as a place for voter registration.

Peter J. McCafferty
Assistant to the President/Community Relations
Jefferson Technical College

PRESENTATION: "The Office Shop: Inspiring Creativity beyond the Classroom"

SUMMARY: Realizing about four years ago that there must indeed be some way of transforming the office-hour period into an interesting, beneficial experience, I instituted three to four regularly spaced mandatory office hours throughout the ten-week quarter. The results of such a policy, both immediate and ultimate, were indeed gratifying: A diminution of alibis for poor performance on papers, an increased awareness of the importance of dialogue between student and instructor, a heightened response to mutual problems in classwork and homework, and a marked growth in intellectual maturity.

Jay A. Yarmove
Associate Professor of English
University College, University of Cincinnati

PRESENTATION: "Training Research, and Assistance Cooperative Extension Service (TRACES)"

SUMMARY: TRACES was initiated as a marriage of the job training consortium with The Ohio Technology Transfer Organization. It has blossomed into a cooperative effort of twenty-three organizations, institutions, and agencies. The heart of the program is to fill the needs of business and industry, without the red tape. TRACES, though only a year old, is a landmark effort to bring business assistance "Back Home."

Larry Palur
TRACES Coordinator
Muskingum Area Technical College

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PRESENTATION: "Use of Micro-Computers in Engineering Technology Instruction"

SUMMARY: A discussion was conducted on the various ways that microcomputers are being used in Engineering Technology instruction at Clark Technical College. These areas include instruction in basic programming, assignment of computer course projects, use as a classroom visual aid, applications in laboratory exercises and use in computer-aided drafting. A microcomputer and plotter were used to demonstrate these applications.

Monty D. Coffin
Associate Professor
Clark Technical College

PRESENTATION: "Women and Networking"

SUMMARY: Women often complain that they have not been socialized to behaviors that have produced the "good ole' boy" system wherein men in positions of high responsibility share ideas, philosophy and career information with colleagues. The presenter rejected this idea by briefly examining group behaviors of young girls, such as Girl Scouts, sports, and dancing classes (which not only promotes group skills but develops fluid body movements that enhance interpersonal communication). A problem seems to be that women have used these skills to develop social networks rather than career networks. Research studies from nursing psychology, business and sociology undercovered the value and benefits of networking. Related concepts of role model parton-protege, mentor, and sponsor were discussed. Specific strategies for developing a career network were identified and tips on how to attend a conference were shared.

Jeri Milstead
Associate Executive Director
Ohio Nurses' Association

PRESENTATION: "Assertiveness Training"

SUMMARY: The workshop will apply basic assertiveness training to on-the-job issues. Using real-life work situations, you will have an opportunity to examine your own styles in terms of assertive, non-assertive and aggressive behaviors, and practice developing an effective, assertive style. Topics to be covered are:

-Getting the job done without stepping on toes.
-Expressing anger or disagreement without being hostile or alienating others.
-Effective ways of dealing with hostility in others.
-Strategies for resolving differences.
-Saying no to unfair demands and how to be an effective listener.

Sharon Darmofall
Associate Professor of Sociology
Lorain County Community College

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HIGH TECH, HIGHER EDUCATION, AND OHIO

Robert Klingensmith

Dr. Edward Jennings, President of The Ohio State University, recently proposed that the University take a leading role in the development of a high tech industrial park in the Central Ohio Region (*Columbus Dispatch*, Oct. 16, 1982, p. 1). In an attempt to explain the role of higher education in the location of high technology firms, this article will consider the following three questions: (1) What are the high technology industries? (2) Why should Ohio encourage them to locate within the state? and (3) What roles do higher education and other factors play in the location decision? A recently published study, "Location of High Technology Firms and Regional Development," prepared by Dr. Robert Premus for the Joint Economic Committee of the United States Congress, sheds a great deal of light on these questions and was used extensively in the preparation of these comments.

First, what are the high tech industries? While no single definition is universally accepted, some characteristics of these manufacturers can be identified. In general these firms form a more heterogeneous group than other segments of the industrial economy. Unlike the auto, steel, or aluminum industries, they are not associated with a single product. The firms tend to specialize in chemicals and allied products, the production of certain types of non-electrical machinery, electronic goods and supplies, photographic and optical equipment, medical goods, and clocks and watches (Most high tech industries are found in major groups 35-38 of the Standard Industrial Classification Code, which includes, for example, computers, robotics, and biogenetics).

The industries as a group are oriented toward labor intensive rather than capital intensive activities. The labor required also tends to be more specialized. Because many of these firms are on the leading edge of scientific innovation and invention, they demand more and better technically trained employees than most other manufacturers. Further, the highly innovative nature of the firms requires that the R & D (Research and Development) components play a much greater role in these corporations than in most other industries.

Second, why should Ohio actively seek high tech industries? The most compelling reason is that Ohio has had the second highest rate of unemployment in the country in recent months. If one measures industrial growth by employment between 1955 and 1979, one would find that high tech employment increased from 5,590,900 to 8,422,600, an increase of 50.6%. During the same period all other manufacturing employment increased from 11,191,100 to 12,550,400, an increase of 12.1%. Clearly, the bulk of the industrial employment opportunities in the past few decades has been generated by the high tech industries.

If one assumes that these industries are desirable from an economic standpoint, than one might ask how Ohio is doing relative to other states in attracting new growth. The Premus study reports on the growth of high tech industries between 1975 and 1979 in 25 selected states. According to Bureau of Labor Statistics data, Ohio ranked 7th in terms of employment and 24th in terms of growth. Only Pennsylvania had a lower growth rate. In terms of relative growth, the figures are even more discouraging. In 1975, Ohio had 5.11% of the nation's high tech employment; by 1979, that figure had dropped to 4.46%, a decline of 12.7%. Only Illinois and Pennsylvania had greater rates of decline, with decreases of 15.2% and 14.2% respectively. The declining states were confined, in general, to the industrial northeast; negative growth rates were recorded in Illinois, Pennsylvania, Ohio, New Jersey, New York, North Carolina, and Connecticut.

Third, what are the location factors for high tech industries? In the industrial location literature, certain types of manufacturers are frequently associated with particular types of sites, e.g., the steel producers are frequently associated with sites where they can combine raw materials at the lowest possible transportation cost; industries with perishable products might locate close to the market; others might seek sites near some specialized labor source. The high tech firms, however, because of the small bulk and high value of their products, generally are free from most constraints of location. They are, as Edgar Hoover suggests, "footloose," free to select almost any site for manufacturing (*Location Theory and The Shoe and Leather Industry*, Harvard University Press, Cambridge, 1937).

The Premus report summarizes survey responses from 691 high tech firms. When the manufacturers considered regional locations, they found the following factors most significant (the percentage represents the number of firms rating the factor as significant or very significant): (1) labor skills/availabilty (89.3%); (2) labor costs (72.2%); (3) tax climate within the region (67.2%); (4) academic institutions (58.7%); (5) cost of living (58.5%); (6) transportation (58.4%); (7) access to markets (58.1%); (8) regional regulatory practices (49.0%); (9) energy costs/availability (41.1%); (10) cultural amenities (36.8%); (11) climate (35.8%); and (12) access to raw materials (27.6%).

On reviewing the twelve factors most frequently cited, one finds that almost any community could meet the needs of any particular industry through government action, private entrepreneurship, and local efforts. Only climate and access to markets and raw materials are outside the control of the local regions. It is worth noting that the climate factor was ranked as significant by a relatively small proportion of the firms, and one can find many examples of prosperous high tech industries located outside of the "Sun Belt." The Route 128 area near Boston is one of the prime examples.

Technical colleges and universities play a key role in the first and fourth most significant factors of the location. Unlike the demand of traditional manufacturers in the northeast, the demand for labor in the high tech industries is not for unskilled and semi-skilled "blue collar" workers. These industries are seeking people with post-high school training to fill positions from technicians to senior research scientists. Where better to meet these demands than in areas associated with institutions of higher education?

The firms depending on new technology frequently are well served by locating near a technical college or university that is actively cooperating with industry. In Northern Ohio, the Lorain County Community College's new High Technology Training Center is an excellent example of a public institution attempting to meet community needs. A brochure published by the Research Triangle Park in North Carolina summarizes the advantages as follows:

> Our cluster of three great university campuses (Duke University, North Carolina State University, and the University of North Carolina at Chapel Hill) is a powerful incentive to new industry. It is their existence within a single, close-knit regional community, the challenging intellectual environment they foster, and their receptiveness to innovation and new ideas that have been the most compelling factors in bringing new industry to the area.

The evidence would suggest that President Jennings is correct in assuming that Ohio State and the other universities and technical colleges of the Central Ohio Region can provide the catalyst necessary for such an industrial park. The relationship between the high tech industries and higher education is often very complementary. Industries of this type need technically trained individuals and often benefit from the basic research carried on at the University. The University can benefit from outside funding for research and the employment opportunities created for its graduates. Thus, when one considers all the factors in site selection, the presence of a technical college or university could be a key factor in the location decision.

The Premus survey also asked high tech firms where they planned to expand during the next five years. The region having the highest potential growth rate, according to the survey, was the Midwest. If Ohio is to take advantage of this planned expansion and reverse the decline of the past decades, industry will need the active cooperation of the region's technical colleges and universities, governmental agencies, financial institutions, and private entrepreneurs who are willing to risk their capital in Ohio.

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PLUS ONE

Our PLUS ONE for this edition is Dr. Hairston's paper presented to joint committees of the Board of Regents—Academic Affairs Committee; Finance and Capital Committee on March 17, 1983. The paper focuses on the role of Developmental Education throughout the colleges and universities of Ohio.

DEVELOPMENTAL EDUCATION: A STATE PERSPECTIVE

Elaine H. Hairston

In a recent series of articles on higher education in Ohio, The *Cleveland Plain Dealer* featured the story of William Stultz. William, valedictorian at his vocational high school, learned only in his senior year that he had the opportunity to go to college. Because he had not taken a college preparatory program in high school, William found himself in remedial mathematics, English and chemistry in his freshman year. With the help of these courses, William overcame his academic deficiencies and expects to receive his degree in engineering next year.

William Stultz's story is not unique. It is repeated thousands of times and with hundreds of variations throughout the colleges and universities of Ohio. Assisting students to close academic gaps has been the goal of Developmental Education efforts in Ohio since 1969 when the General Assembly established the Developmental Education line-item in the budget of the State of Ohio. A significant factor in the creation of funds for this purpose was the growth of the two-year campuses in Ohio during the late 1960's and early 1970's. The increased access to higher education, coupled with Ohio's commitment to open admissions, gave rise to an academically diverse student body, some of whom needed temporary assistance in order to succeed.

Currently funded at $2,250,000 these below college level courses, learning laboratories, and tutorial assistance programs for the basic skills of English and mathematics are designed to bring students up to college level performance. In addition to the $2 million in State funding, colleges and universities expend another $8 million annually to support these programs.

Developmental Education serves two basic groups of students. The first are traditional students who come directly to college from high school. These freshmen may have avoided college preparatory courses, may have taken college preparatory courses and either fared poorly or been taught inadequately. Of all traditional Ohio college freshmen, those graduating from high school and entering college the same year, 20% require remedial mathematics and 15% require remedial English.

The second basic student group is often labeled "non-traditional" and is most often found in large numbers on Ohio's two-year college campuses. Such students are usually over 21, employed, and have been out of school for some time. They are in need of basic skill review. With it, these motivated students are highly likely to complete their subsequent coursework successfully.

Providing appropriate academic experience to students with disparate backgrounds and needs has given rise to a new specialist in higher education: the developmental educator. In the past, many faculty members learned, to their dismay and frustration, that the usual teaching methods often did not work well with underprepared students. New approaches were developed and, along with them, a teaching expertise emerged. Today's developmental education professional understands not only the academic needs of students, but effective ways to address those needs as well. Across the state, developmental educators may be found in the academic departments of English or mathematics, in special learning labs, or in student services settings. They are an integral part of student academic resources.

While supporting the delivery of necessary remedial services to non-traditional students, it is nonetheless important to encourage college bound high school students to prepare appropriately for college. Inadequate preparation often means an extension of time spent in college and can delay a student's major field pursuit. Since 1980, the Ohio Board of Regents and the State Board of Education have worked together on these issues. In 1981, both agencies endorsed the *Report of the Advisory Commission on Articulation* which defined the recommended college preparatory program for students in Ohio. Emphasizing that four years of English (with a focus on composition) and three years of mathematics were basic to collegiate success at both two year and four-year institutions of higher education, the Commission also recommended that university bound students have three years of science, three years of social studies and two years of foreign language for unconditional admission.

Coupled with these efforts are those of colleges and universities which have begun to develop or strengthen working relationships with schools. For example, in 1981, administrators and faculty of the Mansfield Regional

Campus of The Ohio State University met with Mansfield area school superintendents to discuss the implementation of the articulation report.

In 1981-82, The Ohio State University offered the Early Mathematics Placement Test to juniors in 233 Ohio high schools. As an assessment of mathematics performance, this test encourages students to schedule mathematics in their senior year. Students who take senior mathematics require less remediation than their academically comparable peers. It is the hope of the Board of Regents that this test can soon be available to all Ohio high school students and can reflect the placement levels of all colleges in Ohio.

Youngstown State University currently works closely with Youngstown City Schools to assess the writing ability of high school juniors. High school and college teachers work closely and cooperatively to grade student essays holistically.

Such conversations form the basis for improved communication of academic expectations and can, over time, translate into improved student skills.

Within the two-year colleges of Ohio, significant steps have been taken to identify students who need developmental education. Recent research by Carson K. Miller, Dean of Engineering at Stark Technical College, convincingly demonstrates that developmental education courses early in college help students achieve academic success. He further suggests that colleges consider requiring academically deficient students to enroll in developmental education courses rather than allow high risk students to avoid such coursework. It is an unfortunate fact that many students who sorely need developmental education do not recognize their own deficiencies.

Developmental education, a state level concern since 1969, continues to buttress the open admissions law of Ohio, providing temporary educational assistance to thousands of students each year. In an academically appropriate way, developmental education ensures that students have the opportunity to correct identified deficiencies. For William Stultz and thousands of others, developmental education is a sturdy first rung on the ladder of academic success.

Elaine H. Hairston
Director of Special Programs
Ohio Board on Regents
Columbus, OH 43215

FORUM

ISSUE: WHAT IS THE ROLE OF DEVELOPMENTAL EDUCATION ON OHIO'S TWO-YEAR COLLEGE CAMPUSES?

With the current financial crunch, Developmental Education is one of the endangered species in Ohio education. The Journal poses the question concerning the role and value of Developmental Education programs. Benjamin McKeever, Sinclair Community College and Phyllis E. Thompson, Central Ohio Technical College, respond to the issue.

THE CHALLENGE OF ARTICULATION TO DEVELOPMENTAL EDUCATION

One of the challenges confronting Developmental Education is the issue of articulation. Like most challenges, the issue of articulation presents both a threat and a promise. Consequently, if articulation is defined as a problem, then it must also be recognized to be an opportunity.

Articulation may be described in two ways, both of which are related and should ideally complement one another. On the one hand, articulation reiterates the responsibility of the developmental educator to publicly communicate the purposes and objectives of Developmental Education. On the other hand, articulation reemphasizes the obligation of the developmental educator to thoroughly understand the relationship between the basic education program of the secondary school and the core curriculum of the community college. The failure to comprehend this secondary school/community college educational interrelationship often results in an inability to enunciate the mission of Developmental Education in the community college setting. This failure to legitimize Developmental Education may have negative consequences related to its continued acceptance and support.

The climate of opinion regarding developmental Education continues to be mixed, and it is the absence of a consensus that gives rise to the issue of articulation. For many, developmental educators may have assumed that satisfactory answers already had been offered to questions, such as: What is Developmental Education? Why is it necessary? When should it occur? Where does it belong? Who should provide it? How should it be done? These questions regarding our professional identity, must be answered anew by each generation of developmental educators. Effective answers must be provided by developmental educators for our college administrators and legislators who make decisions about Developmental Education funding, staffing, credit and even whether to offer it at all.

Often the institutional and legislative response to the need to support Developmental Education depends upon the resolution of the issue of articulation. Since colleges and legislatures are reluctant to support programmatic post-secondary efforts which are perceived to be duplications of or substitutions for high school, it is incumbent upon developmental educators to counter the perception of Developmental Education as either remediation of

deficiencies derived from high school or cultural enrichment for the culturally disadvantaged with the conception of Developmental Education as adult development, self-improvement, and basic education necessary to lifelong learning.

For example, perhaps it is in Developmental English that the adult student discovers how his unique experience may be made articulate and communicable through his mastery of the grammatical conventions and rhetorical techniques of the English language. Maybe it is through Developmental Reading that the adult student obtains an appreciation for the written experience of others, if not the key to the "wisdom of the ages," by improving his reading efficiency and reading comprehension. Doubtless, in Developmental Mathematics, the adult student will see himself in the roles of producer and consumer, debtor and creditor, and will apply his problem-solving skills to decisions about budgeting, saving, borrowing, buying, selling, investing, and tax sheltering his income. In short, college and legislative leaders must be made to understand that Developmental Education teaches the adult student to interpret, to compare, to apply, and to value his experience of life. What then is the function of secondary education? The high school student should be educated in the basic skills—reading, writing, and arithmetic—and the life skills—critical thinking, problem-solving, and decision-making. High school teachers should endeavor to develop the skill level of the adolescent student from literacy to competency, especially in the language arts (i.e. reading, writing, speaking, listening). High school teachers should develop in students a readiness for adult education and lifelong learning. In short, the purpose of secondary education is to prepare the young adult for adult development and self-improvement, which is Developmental Education.

If Developmental Education is to be understood and appreciated in its full complexity, it must receive the definition and articulation that it deserves. Simplistic, arguments that compare the merits of Developmental Studies to those of physical education or home economics or art appreciation for consideration as college-level work are irrelevant and self-defeating. However, questions concerned with the time and place, content and format, instructor and student of Developmental Studies must be answered by the proposition that adult education is post-secondary education and, as such, should be available in and under the auspices of a post-secondary institution of higher education—preferably, the community college. Developmental Education is adult-oriented, experience-based education. It is not a panacea for the limitations of the past but a celebration of the possibilities for the future.

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ISOLATION TO INTEGRATION

Phyllis E. Thompson

Understanding the state perspective of developmental education and recognizing the benefits such programs offer to the problems of access and retention is the beginning of integration. Incorporating or combining developmental education into the whole of an institution, its mission, its curriculum, its entire scope of academic programming is the next vital step.

If integration does not occur, isolation results. Isolation of developmental education is of a physical nature when the program is regulated to an out of the way, difficult to access corner of the campus. Physical isolation is less severe a handicap to effective programming, however, than is intellectual or philosophic isolation. The walls which create such isolation are often built on misunderstandings of who developmental educators are, and what their mission is in postsecondary education. The diverse fields of developmental educators, from instructors of writing, reading, study skills, and mathematics, to counselors, tutors, laboratory managers and program directors or coordinators, does make understanding difficult. Compound this diversity of duties and positions with a variety of possible settings in academic and nonacademic courses, learning assistance laboratories, remedial programs and developmental programs and the picture becomes even more complex.

As developmental educators themselves begin to articulate their purposes and skills, to conduct research, to unify into professional associations as a specialized, trained, professional nucleus in higher education, they must accept the challenge of dispelling some of the misunderstandings held regarding their positions and programs. Such efforts will begin to tear down the walls of isolation from the inside. Those residing on the outside of the walls also can assist the process of movement from isolation to integration by reading articles such as the ones in this *Journal*, by visiting the developmental education program on campus, by discussing institutional or academic issues with developmental staff members, by talking with developmental students, by serving on advisory or other committees, and by requesting support services. Integration of developmental education into the whole of the institution, from admissions to academic programming, can only increase an institution's ability to meet its educational mission with an increasingly diverse student population. Developmental educators, faculty, staff and administrators need to actively participate in this integration process.

Phillis E. Thompson
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PRACTICUM

Cuyahoga Community College, Cleveland, possesses one of the most successful and outstanding developmental education programs in the state. Dr. Mary Lou Conlin, who pioneered and led the way, shares the CCC program with us.

WHAT WORKS BEST IN DEVELOPMENTAL EDUCATION

Mary Lou Conlin

In 1983, Cuyahoga Community College celebrates the twentieth anniversary of its founding. From the day in September 1963—when the College opened its doors in an old abandoned school building to 2,945 students—to the present—when it serves over 28,000 students at three modern campuses—the College has provided remedial or developmental instruction. We have steadily

tried to improve that instruction and have been fortunate in having an administration that has provided both financial and philosophical support for most of those efforts.

During our twenty years, we have learned a great deal about what works well or not-so-well in developmental education. And, although it is a massive over-simplification to reduce a developmental education program to a few principles, our most successful effort to date has been characterized by having the following qualities:

—clearly stated and equitably enforced student attendance and grading policies
—proactive retention and attendance practices
—clearly stated specific instructional objectives and evaluation criteria
—multiple grading of student assignments
—individualized educational plans based on a cognitively ordered sequence of the specific instructional objectives
—small group and one: one instruction

But what are the criteria by which we judge the success of our developmental education efforts? Of primary importance is the number or percent of students who are successful in the regular courses for which they register *following* their developmental experience. The purpose of developmental work is to provide students with the skills they need to succeed in their regular college-level courses. On this score, using one of our developmental writing courses as the example, 75 percent of the students who proceeded from the course to Freshman Composition completed that course with a grade of "*C*" or better.

Another measure of success is the percent of developmental students who continue working in the course to the end of the quarter. On this measure, we scored 77 percent.

An additional measure is the percent of students who achieve the objectives of the course. When students were permitted to extend their learning time into a second quarter, under an incomplete or in-progress grade, the percent of achievers reached over 82 percent.

We also look at retention between quarters (66-79 percent), retention to graduation (69 percent), and other factors. And, although we are neither satisfied nor complacent about these results, we can say we have been more successful than most colleges with similar student populations. For instance, a recent article (Wyatt and Clowes, *Report from Research and Evaluation Committee: Characteristics of the "New Student" in Higher Education*) cites that 13% of the high risk students not only squeeze by in open-door admissions schools but actually make B+ or better averages at selective institutions.

Except for two aspects of this developmental education effort, any college can do as we did. All teachers can provide their students with a clearly stated attendance and grading policy. In any college, however, all teachers of a particular course should follow, and enforce equitably, the *same* policy. And, although some teachers may say this infringes on academic freedom, those of us in any given institution can treat students equitably only if we set equal standards and expectations for them.

It takes time to carry out proactive retention and attendance practices. When our investigations showed that as many as 15 percent of the students who registered for one of the developmental communications courses never reported for classes, we distributed information at registration about the importance of attending the first class and the attendance policy (i.e., that students who missed more than three meetings would be dropped). This was followed by telephone calls and letters to students who had not reported by the second class meeting, again notifying them of the attendance policy. The first quarter, our drop rate was high, but over three quarters it declined to about 15 percent of the original enrollment, which included students who withdrew or stopped coming because they were not doing well in the course.

Teachers may find it somewhat more difficult to define the specific instructional objectives of a developmental course and the criteria by which achievement of the objectives will be measured. Again, the objectives and evaluation criteria should be consistent among all teachers of the course. Agreement assures that students are treated equitably and that teachers of following courses know the competencies their students have achieved.

Even with agreement on objectives and evaluation criteria, students' papers should be evaluated by more than one person—each one applying the agreed-upon evaluation criteria as precisely and objectively as possible. Multiple grading assures the objectivity of the evaluations and appears correlated with the success rate of students who go on to freshman composition. Of the students who were approved for freshman composition of the basis of multiple grading of their work, 75 percent succeeded in the course; of those who were approved on the basis of a single teacher's grading, only 66 percent succeeded.

The final two characteristics of the course may be the most difficult to achieve, but they are essential to the student's success in the course and lasting intellectual development.

True developmental education requires developing the student's ability to reason and to apply such reasoning to, for example, writing. This requires analyzing, first, the cognitive demands of the objectives of the course and then, second, sequencing the objectives so that the student progresses from tasks requiring only knowledge to those requiring application of that knowledge and, finally, to its synthesis. It is one thing to know the rule that a verb must agree with its subject, but quite another to apply that rule in writing. Also, the ability to classify is a fundamental reasoning skill, but applying that ability in the content and development of an essay requires higher level reasoning. We can develop such higher level reasoning only by having objectives that require it and a carefully ordered sequence of objectives that lead to its achievement.

Students progress at different rates, for a variety of reasons. We recently had the honor of having Dr. Benjamin Bloom at the College for a seminar on mastery learning. He noted that 1:1 instruction was the most successful learning method and shared graphs to support that statement. When we provide 1:1 tutoring, coupled with some small group work, we achieved the greatest student success and retention rates. We also achieved an average of only six hours of tutoring time for students to achieve the objectives of a course that was highly demanding. Obviously, tutoring can be costly if it is provided in addition to a full-time faculty member with a normal student load. To be cost effective as well as instructionally effective, a teacher must be willing to accept a larger student load; to delegate some responsibility to the tutor; and to forego, perhaps entirely, their favorite but questionably effective mode of instruction—the lecture. Such changes in the teacher's role are the most difficult to achieve of the several developmental education principles that have worked best for us. We speak often of our students' differences in preparation and ability and in rate and style of learning. One teacher cannot do justice to 100 or more such different students, but given a well-trained group of tutors as helpers, the teacher can sometimes work wonders. For such student

success, perhaps we should be not only be willing but eager to change our traditional ways of organizing and delivering instruction to our students.

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REACTION

The Journal encourages letters and articles in reaction to its contents, its policies, and its activities.

MARKETING THE HUMANITIES— THE SCIENCE FICTION APPROACH

Larry C. Edwards

Star Trek. 2001. Close Encounters. Blade Runner. E.T.: Few of us can read these titles without having *some* reaction. Science fiction, as a literary genre, has grown steadily in popularity and quality since its beginnings in the late 18th Century. Today, the science fiction market has grown exponentially; science fiction novels and movies are merely the tip of the iceberg.

"Phone Home" slogans adorn car bumpers, drinking mugs, and children's play clothes. "The market," as advertising specialists say, "is out there." Those of us who are interested in the humanities must move into the market. In short, it does little good to wring our hands over the fact that in two-year schools, the humanities courses end up being the "poor boys on the block."

What, then, can we do? If we wish to advance the cause of the humanities, particularly literature, in the two-year schools, we must develop coherent marketing strategies designed to "sell" the need for the humanities to potential employers, to our institutions, to the students, and to the communities we serve.

We are living in a dreamworld more fantastic than science fiction if we believe that all we need to do is to design a literature course, put it in the catalogue, and wait for students to line up at the door—especially when the course is not required and is not the type of literature the students read. As much as we may have enjoyed *The Marble Faun* or *The Ambassadors* in graduate school, we must realize that most of our students have a different orientation; the least we can do is to meet them halfway.

Three points must be kept in mind if one is designing a literature course for a two-year school: The course should use, if possible, a single text (lower cost, less intimidating) which contains the best writing of that particular genre; the course must somehow integrate the literature with the students' technologies (be relevant), and it must be marketed, marketed, marketed.

Our marketing strategy for the science fiction course here involved intensive, unremitting advertising for the entire quarter preceding the start of the course. Closer to course selection time, announcements were placed in campus newspapers and a science fiction art slide show was assembled and then presented in the student lounge. As a result, in contrast to the 8-12 students who might normally be expected to sign up for such a course, we have

29 students signed up already, with the possibility of a few walk-ins the first week of the quarter.

What we have done with science fiction can be done with other types of literature; at the end of the science fiction course, students will produce a brainstorming-type paper involving some aspect of their technologies projected into the future. Other types of literature which lend themselves to integration into technical school programs are mysteries, romances, best sellers, and children's books.

It is possible to bring the humanities into two-year schools. But first we must realize that we are operating in the marketplace. If we want well-rounded individuals instead of one-sided technocrats, we must help create them. Many of our students will be working well into the 21st Century. They know the ABC's, but how many of us know BASIC? It's time to integrate the technologies and the humanities, just as our brains integrate logical and metaphorical thinking.

Technology may produce a machine to keep us alive longer; the humanities tell us why to use it—or when to turn it off. Chemistry has shown us that fuels the spark of life in the human breast; literature tells us how and why that spark burns brightly or is quenched.

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INFORMATION FOR PROSPECTIVE CONTRIBUTORS

The *Journal* encourages submission of material for any of its sections by faculty, staff, administrators and/or trustees of any of Ohio's community, general and technical, junior, regional and technical campuses. The *Journal* is particularly receptive to articles of general profession importance in the areas of administration, instruction, and baccalaureate or technical studies for two-year institutions.

There are forty-five solicitors of editorial material listed here. Contact your campus solicitor or one nearest you to inquire about submitting a specific manuscript.

Manuscripts must be typed double-spaced and of approximately 1,000-3,000 words in length. All submissions must be accompanied by a stamped self-addressed envelope for return. Art work must be black and white. Photos glossy; tables and drawings on 8½ by 11 paper. The name and address of the contributor should be on the back of all art copy.

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Submission deadline for the next *Journal* is September 12, 1983.

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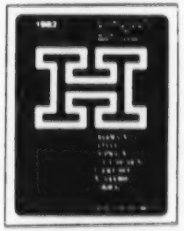

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